



FILE
1983
SJT 400

SelectaVision® VideoDisc System Basic Service Data

Model SJT 400

RCA Corporation
Consumer Electronics

Technical Publications
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SJT 400

TO AVOID ERROR file all supplements and addendums as soon as received. Consult these before ordering parts.

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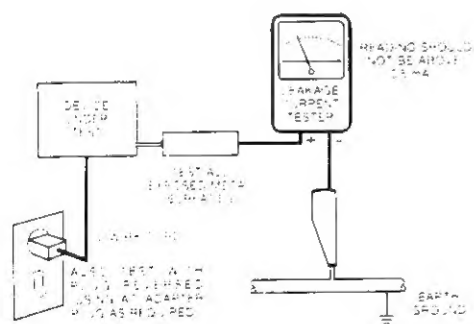
CAUTION: DO NOT USE MONAURAL ALIGNMENT (TEST) DISC STK. NO. 149235 WITH MODELS COVERED BY THIS SERVICE DATA.

SAFETY NOTICE

Components having special safety characteristics are identified by shading on schematics and by * stars on the parts list in this Service Data and its supplements and bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Data.

1. **Before returning the VideoDisc Player to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items.

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this VideoDisc Player to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the VideoDisc Player, be sure to put back in place all protective devices, including, but not limited to, non-metallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.
- c. **Leakage Cold Check** — With the VideoDisc Player AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the VideoDisc Player AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each push button/customer control, exposed metal screws, metalized overlays and to each cable connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm (except for the center conductor of the F connector that feeds the TV receiver which will measure *open* when the function switch is in the play position) an abnormality exists that must be corrected before the VideoDisc Player is returned to the customer. Repeat this test with the VideoDisc Player AC switch in the *off* position. All the preceding tests should be made with a *Disc* in the player and repeated *without a Disc* in the player.



AC Leakage Test

d. Leakage Current Hot Checks

On completely assembled instrument, with a *Disc* in the Player and all tests repeated without a *Disc* in the Player, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 *Leakage Current for Appliances* and Underwriters Laboratories (UL) 1410, (50.7). Measure for current, with the

player in the *play* position and repeat with the player in the *Load—Unload* and *off* positions from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal or conductive parts of the instrument (antenna connections, handle bracket, metal cabinet, screwheads, metallic overlays, push-buttons, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the Player deck. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test.

ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING TO AN ANTENNA OR ACCESSORIES.

e. Interconnected Equipment AC Leakage Test

Avoid shock hazards. The television instrument, accessory, or cable(s) to which this VideoDisc Player is connected should have the applicable sections of the leakage resistance cold check and the leakage current hot check performed. Do not connect this VideoDisc Player to a TV antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the VideoDisc Player cabinet, and on the Player deck.
3. **Design Alteration Warning** — Do *not* alter or add to the mechanical or electrical design of this VideoDisc Player. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio and/or video output connections, cables and accessories etc. might alter the safety characteristics of this VideoDisc Player and create a hazard to the user. Any design alterations or additions may void the manufacturer's warranty and may make you, the servicer responsible for personal injury or property damage resulting therefrom.
4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts — be sure that leads and components do not touch thermally hot parts in the AC and DC supplies. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.
5. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.
6. **PRODUCT SAFETY NOTICE** — Many electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in RCA service data by *shading* on schematics and by a (*) in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in RCA service data parts list might create shock, fire, and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current RCA service literature. A subscription to, or additional copies of, RCA service literature may be obtained at a nominal charge from your RCA Consumer Electronics Distributor or from RCA Technical Publications, P.O. Box 1976, Indianapolis, IN 46206, or Canadian residents may order from RCA Inc., Technical Publications, 5575 Royalmount Ave., Town of Mount-Royal, Quebec H4P 1J8 Canada.

CAUTION: Before servicing instruments covered by this service data and its supplements and addendums, read and follow the **SAFETY PRECAUTIONS** on page 2 of this publication. **NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 2 of this publication, always follow the safety precautions. *Remember: Safety First.*

General Servicing Precautions

1. Always unplug the instrument AC power cord from the AC power source before:
 - a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.
 - b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

Caution: A wrong part substitute or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do *not* spray chemical on or near this instrument or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90% - 99% strength).

Caution: This is a flammable mixture.

Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do *not* defeat any plug/socket B+ voltage interlocks with which instruments covered by this service data might be equipped.
5. Do *not* apply AC power to this instrument and/or any of its electrical assemblies unless *all* solid-state device heat sinks are correctly installed.
6. Always connect the test instrument ground lead to the appropriate instrument chassis ground *before* connecting the test instrument positive lead. Always remove the test instrument ground lead *last*.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a *grounded-tip* soldering iron to solder or unsolder ES devices.

4. Use only an *anti-static* type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do *not* use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do *not* remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the instrument ground or circuit assembly into which the device will be installed. **CAUTION:** Be sure no power is applied to the instrument or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500 F to 600 F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique:
 - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
 - b. Heat the component lead until the solder melts.
 - c. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.

CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique:
 - a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).
 - b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.
 - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
- CAUTION:** Work quickly to avoid overheating the circuit board printed foil.
- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Removal/Replacement

Use the following technique for IC removal and replacement.

Removal

1. Desolder and draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas.)

"Small-Signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heatsink mounting screw (if so equipped).
3. Carefully remove the transistor from the circuit board.
4. Insert new transistor in circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicularly to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuse and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.
2. Securely crimp leads of replacement component around notch at stake top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off", the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

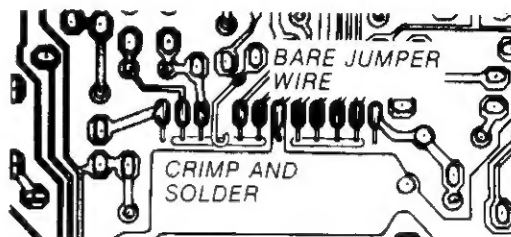
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as *Critical Copper Pattern* and is identified and illustrated in this service data in the section titled *Safety Related Copper Pattern* (see table of contents for page number). Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your local RCA Consumer

Electronics Distributor Service Manager before attempting repair of Critical Copper Pattern.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)
2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.

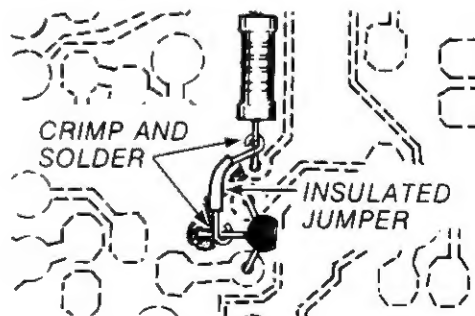
*Install Jumper Wire and Solder*

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections


Use the following techniques to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.

*Insulated Jumper Wire*

CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges. F013.4.2

Power Input: — 120 VOLTS, 50/60 Hz.
Power Consumption: — 31 WATTS
Antenna Impedance: — 75 ohm in/out
RF Output Level: — 3 mV Maximum
 1 mV Minimum
 Switchable to
 Channel 3 or 4
Circuit Boards: — PW 200 — RESONATOR
 PW 400 — Arm Preamp
 PW 600 — AC input
 PW 900 — Remote IR Preamp
 PW 1700 — Display
 PW 5600 — Function Switch
 Assembly
 PW 6100 — RKM/Features/OSD
 PW Hook up-Arm Interconnect

PW Master — Master Circuit Board
Weight: — Approx. 21 lbs.
Dimensions: — WIDTH — 17" (431.8 mm)
 DEPTH — 16-1/2" (418.9 mm)
 HEIGHT: — 5" (126.7 mm)
Turntable Speed: — 449.55 RPM Direct Drive
 Quartz-Locked
Play Time: — 2 hours (1 hour per disc side)
Video Signal System: — EIA Standard NTSC Color
 Signal
Video Output: — 1V p-p into 75-ohm termination 2V p-p
 unterminated
Audio Output: — 2 channel 200 mV \pm 20 mV RMS, into
 10K ohm or greater impedance
Disc Play System: —  Capacitance
 Electronic Disc

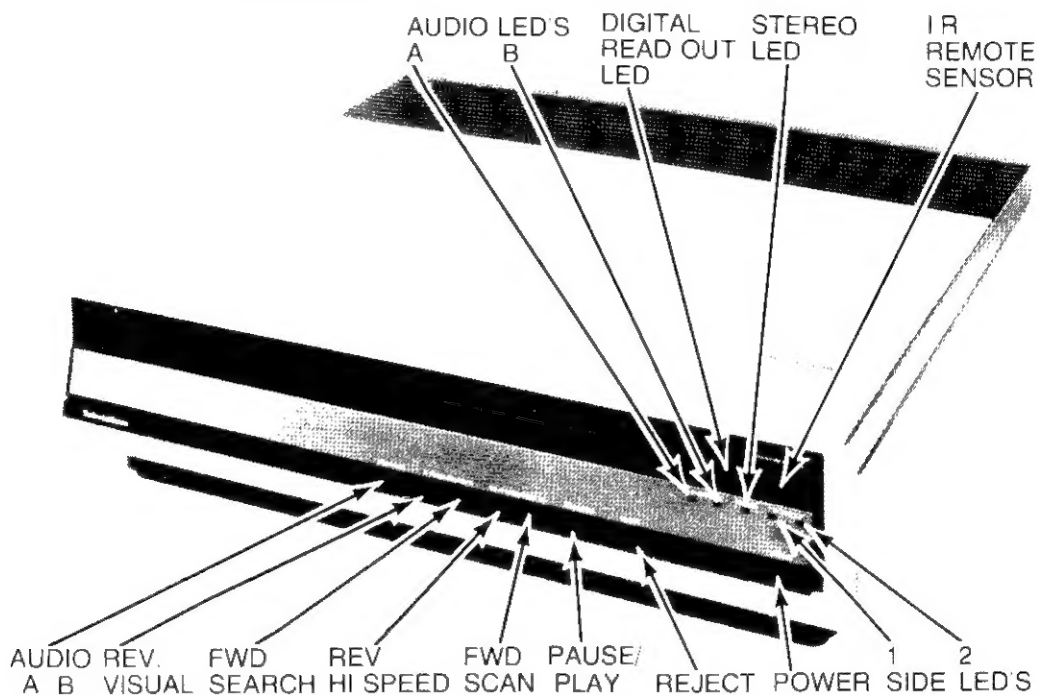


Fig. 1—Operating Controls

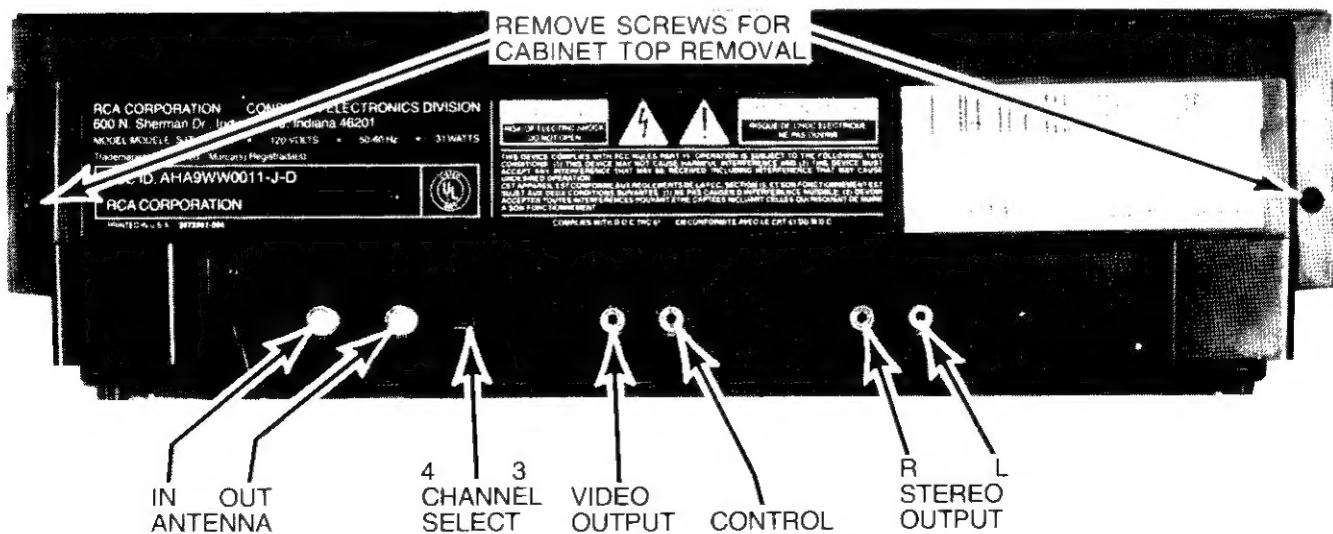


Fig. 2—Rear Panel Connections

NOTE: In addition to the LED Digital Readout indicator on the player, described in the following text, the SJT 400 RANDOM ACCESS VideoDisc player also has ON SCREEN DISPLAY capability which prompts the user in the operation of the instrument. See customer instruction book for more detail.

Power On/Off — Load — Play — Unload

Power is applied to the player by depressing the player on/off button. The player automatically places itself in the "Load" position (caddy entry door open). The digital readout indicator lights and displays a flashing "L".

To load player, insert loaded caddy into player gently until the player loading mechanism takes hold and pulls caddy into player (DO NOT force caddy into Player). When the caddy spine is latched the loading mechanism will reverse and return the empty sleeve (caddy) out beyond the caddy entry door opening. Remove the empty sleeve (caddy) from the player and the player will automatically place itself in the "Play" mode. During the automatic cycle the digital readout will display —●—. In approximately 10 seconds a picture will appear on the TV screen and the digital readout will begin to display elapsed playing time in minutes.

When "Play" is completed (approximately 60 minutes) the digital readout will display a flashing "E" momentarily then the "E" lights continuously. In approximately 8 to 10 seconds the player automatically places itself in the "Unload" mode. The digital readout will display a flashing "UL" and the caddy entry door will open. Insert empty sleeve (caddy), in same manner prescribed for load procedure, to retrieve the disc and spine from the player. Remove loaded caddy from player and the digital readout will then begin displaying a flashing "L".

Audio A/B Button

This function is active only when playing a special DUAL sound track or BILINGUAL disc. Press to select either the primary sound track "A" or the secondary sound track "B". Depending upon which sound track is active, the corresponding LED display lamp will light. (A/B).

Note: The player automatically selects the proper audio playback mode whether you are playing a special dual sound track, Bilingual, Stereo or monaural VideoDisc

Visual Search

Pressing either *Visual Search* Button, Fwd ► or Rev. ◀, (with disc in player) permits faster than normal (16 times normal speed) movement of the pick-up arm assembly. The stylus remains in contact with the disc permitting *Visual Search* (scan) viewing of the program material (audio is muted during this mode of operation).

Hi-Speed Scan

Pressing either *Hi-Speed Scan* Button, Fwd ►► or Rev. ◀◀ (with disc in player) permits rapid (120 times normal speed) movement of the pick-up arm Assembly. The stylus remains in contact with the disc permitting hi-speed scan (search) viewing of the program material (Audio is muted during this mode of operation).

Pause/Play

Pressing the "*Pause*" Button (with disc in player) places the stylus lifter circuit into operation raising the stylus off the disc. Video is blanked, audio is muted, and there is no movement of the pick-up arm assembly in this mode of operation. The digital readout will display a flashing "P". Pressing the "*Pause*" button a second time returns the player to normal operation. The in arm stylus cleaner (sweeper) is activated in the "Pause" mode.

Stereo Sound

By connecting an external stereo amplifier (optional equipment) to the stereo output jacks on the back of the player you can enjoy stereo sound when playing a stereo disc.

Video Out Jack

The video output jack (located on the back of the player) makes it possible to connect video from the player directly to a TV set or monitor equipped with a video input jack.

CIRCUIT PROTECTION

Fuse (or Device)

F601

Circuit Protected

AC input

Physical Location

PW 600

Note: Technicians servicing this product will find helpful the following related **RCA** Technical Training Publications.

VideoDisc Manual SJT200/300-1

VideoDisc Manual SJT400 TR

These publications may be ordered, for a nominal charge, from: RCA Technical Publications 1-450, P.O. Box 1976, Indianapolis, IN 46206.

The New RCA SelectaVision Random Access VideoDisc Player is simple to operate, and easy to install. External connections to and from the player are minimal, involving only intercept and reconnection of the television VHF antenna input lead (cable). Necessary connecting lead (cable) and matching transformers are included to handle all but unusual installations.

1. A 5 foot, 75 ohm coaxial cable connects from the antenna out connector on the player, to the VHF antenna input on the television receiver. Use cable direct if the television has 75 ohm VHF antenna input connector; use via a 75 to 300 ohm matching transformer/adaptor if the television VHF antenna input is 300 ohm.
2. A 300 to 75 ohm matching transformer/adaptor mates a 300 ohm twin lead antenna system (outside or rabbit ears) to the player 75 ohm antenna input system. (Captive, screw type lugs are integral to the 300 to 75 ohm antenna matching transformer/adaptor; strip and insert the 300 ohm twin lead wires then tighten the screws.) Keep in mind — for different or "odd" antenna systems — the antenna input and output of the Video Disc Player is 75 ohm unbalanced.

Antenna connection instructions should be carefully followed. The player produces an R-F signal which is transmitted on VHF Channel 3 or 4 (switch selectable) frequency. If the player antenna output is connected to an antenna, directly or in parallel from the television antenna input connections, the player may broadcast a signal. Broadcasting an unauthorized signal could violate certain regulations of the Federal Communications Commission regarding the operation of R-F devices. Recheck the installation to avoid any broadcasting possibilities; make sure the 75 ohm shielded cable is used to connect the R-F output of the player to the television receiver, and that no other connections are paralleled from these terminals.

The physical location of the antenna "in" and "out" connectors are depicted in the rear apron photo of the Video Disc Player (Fig. 2). "F" type connectors accept the VHF antenna input and output cables.

Interface of the antenna system, Video Disc Player, and monitor television receiver is controlled by an electronic antenna switch in the player. When the Player ON/OFF Switch is in the "OFF" position, the antenna is connected directly (via the player electronic antenna switch) to the television receiver and the television will operate normally. When the player ON/OFF switch is in the "ON" position, the antenna is disconnected and the player R-F output is connected directly to the television VHF antenna input connector. Under this condition the television receiver will receive a signal only on Channels 3 or 4 (switch selectable on the rear of Video Disc Player Fig. 2). Specifi-

cally the Video Disc Player antenna switch system serves to either connect the antenna system direct to the television VHF antenna input or disconnect the antenna system and connect the Video Disc Player R-F output direct to the television VHF antenna connector.

Stereo output jacks are available for connecting (cable included) stereo sound output to an external Stereo Amplifier (optional equipment). Also available is a Video Output Jack for connecting (cable not included) a video signal directly to a television receiver or video monitor equipped with video input capabilities.

The new design of the RCA VideoDisc player uses the single-main circuit board concept. The main circuit board contains nearly all of the electronic circuits. Circuits not contained on the main circuit board are AC input, resonator, pick-up arm preamp, and in the case of the remote controlled Random Access VideoDisc player, the remote preamp and remote control/Features/on screen display circuits.

Servicability of the new VideoDisc player is enhanced by the logical physical arrangement of circuits on the main circuit board. The board is segmented by **circuit area**. AND FURTHER ENHANCED BY PROMINENT ROAD MAPPING ON THE CIRCUIT BOARD. In addition, a component numbering system is used which relates to general circuit areas and will aid in readily locating individual components.

The SJT 400 VideoDisc player has the capability of random access to any area of the disc. Included with the unit is an infrared hand unit which allows the user to control all functions of the player except Power On/Off and caddy insertion/removal. Front panel buttons are provided to control simple functions of the player along with a two digit LED digital display device.

To assist the user during the *Remote Random Access* and *Program* operation, the player displays an on-screen message which indicates the operating state of the VideoDisc player, prompts the user with the appropriate action to be taken, and assists in programming the Random access features.

There are two IR remote units capable of controlling the random access VideoDisc player. The CRK-36 (furnished with the player) is dedicated solely to the control of the SJT 400 player. The CRK-32 (referred to as the Digital Command Center) can control not only the SJT 400 VideoDisc player but certain other RCA home entertainment products having IR controlled capabilities.

For complete CRK 36 IR Remote Random Access and Program operation instructions refer to SJT 400 Owner's Manual Part No. 2817354.

For complete CRK 32 IR Remote "Digital Command Center" operation instructions refer to RCA Technical publications File 1983 DCC-1.

Circuits not located on the Main Circuit Board and their numerical designation.

Component Numbering Versus Circuits.

0 - 99 — Mechanism/Player mounted components
 100 series — PW Hookup on Arm assembly
 200 series — Resonator on Arm assembly
 400 series — Arm Preamp on Arm assembly
 600 series — AC input
 900 series — IR preamp
 1700 series — Display board assembly
 5600 series — Function Switch assembly
 6100 series — RKM/Features/OSD

Circuits located on the Main Circuit Board and their numerical designation.

Component Numbering Versus Circuits

2000 series — Power Supply

2500 series — Pulse Interference Corrector (PIC)
 2700 series — Video Output
 3100 series — Non-Linear Aperture Correction (NLAC),
 Sound Beat Correction
 3200 series — Video Demodulation
 3300 series — Comb Filter/Defect Corrector
 3400 series — Video Converter and Time Base
 Correction
 3500 series — RF Modulator
 4100 series — Audio Modulator
 4200 series — Audio Track/Hold Mute (CMOS switch)
 4300 series — Audio Matrix and Buffer
 4400 series — Audio Decoder Rectifier
 4500 series — Audio Decoder Control
 4600 series — Audio Output
 5100 series — Player Control
 5300 series — Kicker Pulse
 5900 series — Mechanism Control

INSTRUMENT SHIPPING

The customer instruction book advises the customer to retain the shipping tabs, original carton and packing material for use should they need to repack the player for moving or shipping.

To reinstall the shipping tabs for moving or shipping:

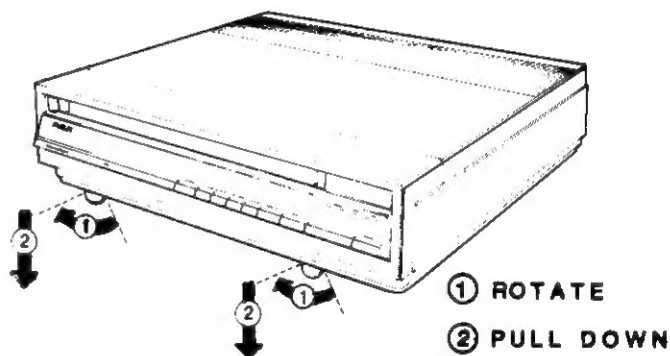
1. Be certain player is in "OFF" mode (caddy entry door closed).
2. Disconnect player from AC power and remove antenna Connections.
3. Replace shipping tabs (see illustrations).
4. Repack player in original carton for shipping using original packing material.
5. Be certain to include player accessories (antenna hook-up cable and adaptors, stereo hook-up cables and Remote transmitter) if instrument is being returned for service.

NOTE: Two different size shipping tabs are used. The large diameter pin shipping tab goes on the right side and the small diameter pin shipping tab goes on the left side.

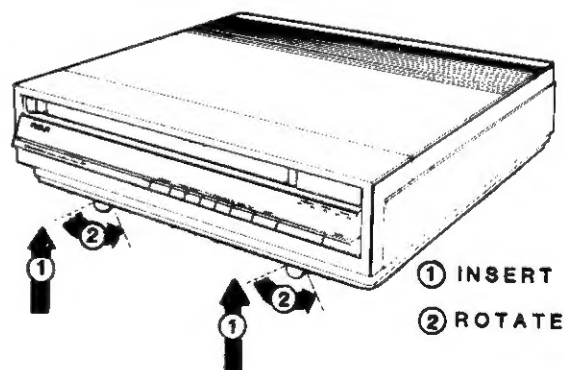
Preparing The Player For Out-of-Carton Transport

When transporting the player out of original packing material, the following guidelines are recommended.

1. Be certain player is in "OFF" mode (caddy entry door closed).
2. Disconnect player from AC power source and remove antenna connections.
3. Replace shipping tabs (see illustrations).
4. Player can now be transported safely.



Shipping Tabs—Removal



Shipping Tabs—Installation

AM — Audio Modulation
AMA — Audio Mute Primary Channel A
AMB — Audio Mute Secondary Channel B
ANX — Antenna Transfer
AO — Arm Output
AS — Arm Stretcher
CAB — Channel A/B
CO — Clock Output (or Chroma Output)
CR — Caddy Reverse
CS — Caddy Sense
CV — Control Voltage
CY — Cored Luminance
DD — Decoder Defeat
DG — Defect Gate
DS — Display
FM — Function Motor (or Frequency Modulation)
GND — Ground
HE — Hall Effect
HNC — Home Normally Closed
HNO — Home Normally Open
Hz — Hertz
IC — Integrated Circuit
KPO — Kicker Pulse Output
LA — Landing
LED — Light Emitting Diode
LO — Load
LSE — Least Significant Digit Voltage
MA — Modulator Audio
MSE — Most Significant Digit Voltage
NS — Negative Supply

OSD — On Screen Display
P — Play
PAU — Pause
PLL — Phase Lock Loop
RAF — Random Access Forward
RAR — Random Access Reverse
RES — Reset
RKM — Remote Keyboard Microcomputer
RS — Radius Sense
RSF — Rapid Search Forward
RSR — Rapid Search Reverse
SB — Sound Beat
SC — Stylus Clean
SI — Side Indicator
SL — Stylus Lifter
SQ — Squelch
SR — Sound Reference
SS — Spine Sense
SWP — Sweeper (in Arm Stylus Cleaner)
TT — Turntable
UNL — Unload
V — Voltage
VB — Video Blanking
VDO — Vertical Detail Output
VR — Voltage Regulator
VSF — Visual Search Forward
VSR — Visual Search Reverse
Y — Luminance or B/W Video
Z — Impedence

SAFETY RELATED COPPER PATTERN

Modern circuit design/manufacturing techniques dictate a rather high component density on the printed circuit board utilized in this instrument. It naturally follows that the area available for "printing" copper patterns is also restricted. To maintain high reliability and safety standards, the printed circuit boards are manufactured under carefully controlled conditions and to extremely close tolerances. Some areas of the board are more critical than others due to spacing, pattern size, voltage/current requirements, etc. RCA has concluded, as a result of extensive studies that less-than-optimum repair of copper pat-

terns in these specific areas can degrade the reliability/safety of the instrument. The critical copper patterns are shown as "dark black" in the illustration (Fig. 3). In the event printed circuit damage is evident in these designated areas (copper pattern broken, lifted, etc.) special soldering techniques are necessary to maintain reliability and safety standards. Contact your local RCA Consumer Electronics Distributor Service Manager before attempting copper pattern repair in the designated areas on the board layout.

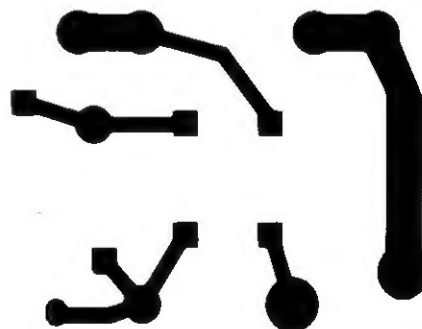


Fig. 3—PW 600 Critical Copper Pattern

- Analog** — Of or pertaining to the general class of devices or circuits in which the output varies as a continuous function of the input.
- Angstrom** — One tenth of a millimicron. Angstrom unit is a term utilized to express the length of very short waves.
- Beats** — A term used to describe the unwanted signals produced when two original signals are mixed together.
- Buried Subcarrier** — See Subcarrier, except frequency is down converted. Example: In CED system color burst is 1.53 MHz.
- Burst** — A short time occurrence (8 to 10 Hz) of the color subcarrier signal appearing right after Horizontal sync, but centered on the blanking portion of the video waveform.
- Caddy** — Name given to device in which the Video Disc is enclosed (see sleeve).
- Chroma** — The color portion of a video signal.
- D Flip-Flop** — A dual solid state processing circuit, the output of which is determined by the input.
- DAXI** — Digital Auxiliary Information recorded on the disc and utilized by the player control microcomputer to control operation of the disc player.
- Delta Frequency (Δf)** — A term to indicate that a signal or frequency has some variation or change.
- Dropout** — A momentary absence of carrier signal off the disc, whether due to uneven stamping or a particle of dust on the disc or stylus.
- Deviation** — A term used to describe how far the FM carrier frequency swings when it is modulated.
- Digital** — Of or pertaining to the class of devices or circuits in which the output varies in discrete steps (i.e., pulses or "ON-OFF" operation).
- Emphasis** — The process of boosting the level of the high frequency portions of the video signal.
- FM Signal** — Abbreviation for Frequency Modulated Signal.
- Field** — One half of a television picture. A field consists of 262.5 horizontal scanning lines across a picture tube. Two fields (line 1 thru 262.5 and line 262.5 thru 525 interlaced) are necessary to complete a fully scanned television picture (frame). The two sweeps of the TV picture tube, or two fields make up one complete TV picture or "frame". Frame repetition is 30 Hz, therefore field repetition is 60 Hz.
- Frame** — One complete television picture (see "Field").
- Gate** — A circuit which will deliver an output only when a specific combination of its inputs are present for use in analog or digital applications.
- Integrated Circuit (IC)** — An electronic device in which both active and passive elements are contained in a single package.
- Interlacing** — The property of the scan lines of two television fields to lie in-between each other.
- Interleaving** — A term used to indicate that the harmonics of the chrominance signal lie in-between the harmonics of the luminance portion of the video signal as it is viewed on a spectrum analyzer. This means that the color information of a video signal does not interfere with, although it is broadcast at the same time as, the luminance information.
- Jitter** — The name of an effect on the playback picture (sometimes referred to as "Wiggles" or "Flutter"). The picture appears to have a rapid shaking motion.
- Luminance** — This is the portion of the video signal which contains B/W information and sync (see "Y" signal).
- Micro Computer** — (μC) A compact and inexpensive computer relatively limited in capability and capacity, consisting of a microprocessor and other components of a computer, commonly used to store and process digital information.
- Micron** — One millionth part of a meter.
- Microprocessor** — (μP)— A miniaturized integrated circuit device which performs all of the functions of a central processing unit.
- NLAC** — Non Linear Aperture Correction — System which compensates for non-linear response of the stylus to the disc information.
- NTSC** — (National Television Systems Committee)— These four letters identify the United States Color Television Standard.
- PIC** — Pulse Interference Corrector—Circuit which detects and compensates for interference generated in the 900 MHz frequency range.
- Resonator** — A circuit that responds in accordance to oscillations produced in another circuit.
- Sample and Hold (S/H)** — A process by which the value of a particular signal is measured at a specific moment in time — then this signal is stored for later use.
- Servo** — Short for Servomechanism. An electromechanical device whose mechanical operation (for instance, motor speed) is constantly being measured and regulated so that it closely matches or follows an external reference.
- Sleeve** — Another name applied to the caddy in which the VideoDisc is enclosed. (See Caddy).
- Spine** — Device utilized in conjunction with the Video-Disc and caddy to support the disc when it is transferred from the caddy to the player.
- Stylus** — Diamond tipped device utilized to transfer video and audio information from disc to pickup arm assembly electronics.
- Subcarrier** — A carrier signal inserted within the pass-band of a broadcast signal to provide a channel for the transmission of additional information.
Example: In color TV, the 3.58 MHz color burst.
- VCO** — (Voltage Controlled Oscillator) An oscillator whose frequency of oscillation is governed by an external voltage and/or timing capacitor in IC applications.
- VCXO** — (Voltage Controlled Crystal Oscillator) Similar to VCO except that a quartz crystal is used as a reference.
- XTAL** — Abbreviation for Crystal.

Segment	Time Display (Minutes)	Video Display	On Screen Display	Audio**	Daxi Band	Audio Code	Service Application
A	12	Grey Field		S1 Unmodulated S2 Unmodulated	0	None	Stylus Landing Check
B	01	Grey Field w Time Count	0 00 1 12 2 12 3 12	S1 Unmodulated S2 Unmodulated	1		Stylus Landing Adjustment
C	2	Uniform Motion on Grey Field		1020Hz 100%	2	None	Audio Level Adjust Mono Player Visual Search FWD REV Check
D	6	Color Bars		S1 Unmodulated	3	None	Chroma and Video Adjustments General Picture Quality Check Stereo Indicator Check
E	10	100 IRE, White Field	100 IRE	S1 480Hz 50% S2 1020Hz 50%	4	Independent Not Encoded	Video Level Adjust Independent Audio Channel Test
F	13	Grey Field	Left Audio	S1 1020Hz 50% S2 1020Hz 50% In Phase	5	Stereo Encoded	Check and Adjust Stereo Separation Left Channel
G	15	Grey Field	Right Audio	S1 1020Hz 50% S2 1020Hz 50% Out of Phase	6	Stereo Encoded	Check and Adjust Stereo Separation Right Channel
H	19	120 IRE 30% Window		S1 Unmodulated	7	None	Modulation Depth Adjust
	23	5 Step Linearity w Defect		S1 Unmodulated	8	Mono Encoded	Defect Substitution Level Adjust
J	27	Unmodulated (5MHz Carrier)		S1 Unmodulated	None		5.11MHz VCO Frequency Adjust
K	31	Demonstration		S1 Demonstration S2 1020Hz 100%	10	Independent Not Encoded	General Picture and Sound Check
I	35	Grey Field	No Audio Carriers		11	None	Sound Beat Check
M	39	Grey Field	Audio 1	S1 1020Hz 100% S2 Unmodulated	12	Independent-1 Not Encoded	Sound Beat Check
N	43	Grey Field	Audio 2	S1 Unmodulated S2 1020Hz 100%	13	Not Encoded Independent-2	Sound Beat Check
O	47	Grey Field	Audio Decoder Reference	S1 1020Hz 50% S2 Unmodulated	14	Stereo Encoded	Decoder Testing and Audio Output Measurement
P	49	Grey Field	Audio, -30db	S1 1020 Hz 15.8% S2 Unmodulated	15	Stereo Encoded	Decoder Testing and Adjust
Q	51	Grey Field	Audio, -20db	S1 1020Hz 5% S2 Unmodulated	16	Stereo Encoded	Decoder Testing
R	53	Grey Field	Audio -10db	S1 1020Hz 15.8% S2 Unmodulated	17	Stereo Encoded	Decoder Testing
S	56	Uniform Motion on Grey Field		S1 Unmodulated S2 Unmodulated	18	Stereo Encoded	Visual Search Check Background Noise Level Check
T	60	Vertical Lines w Time Count	0 00	S1 Unmodulated S2 Unmodulated	19	Independent	Armstretcher Check and/or Adjustment
U	62 E	Grey Field w Time Count	2 00 E	S1 Unmodulated S2 Unmodulated	63	None None	Daxi Signal Check For End of Recording
V	63	Grey Field w Time Count	3 00 5 00	S1 Unmodulated S2 Unmodulated	20	Independent Not Encoded	Arm Travel Limit Check

Note. Time count in Bands T, U and V is continuous (i.e.), clock does not reset at the beginning of bands U and V.
To access Band V, Rapid Access FWD must be used. Segment V ending time will depend on arm stop.

See Service Data for use of pre-program segments of Bands A and B.

Unless otherwise noted, Modulation/Deviation shown is for S1 only, and S2 is not present. (S1 = 716kHz carrier, S2 = 905kHz carrier)

Time Display will not increment when Daxi Band is not present (Segment J) and "In Arm Sweeper" will operate continuously

Load Sequence

Pressing the on/off button (turning player on) applies power to the Function Motor. The function motor (running in the forward mode), drives the pulley and 1st reduction gear and the pinion and 2nd reduction gear which in turn drives the upper and lower power assist gears and caddy rollers. The upper power assist gear drives the power assist hub and rod assembly transferring power to the pawl drive gear that in turn drives the function gear. The function gear, as it rotates to the load position opens the caddy (sleeve) entry port door through mechanical linkage, operates the disc transfer rod and activates the mechanism load switch (S9). The digital display will display a flashing "L" indicating the player is in the "Load" mode (See Fig. 4).

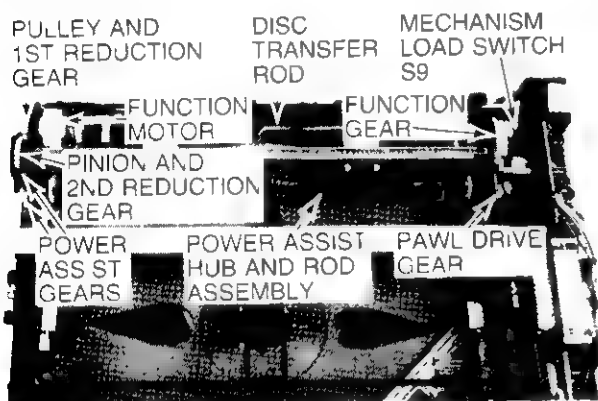


Fig. 4—Mechanism Identification

Insertion of the loaded Caddy (sleeve) into the player first encounters the Pawl Actuating Crank lever which, through mechanical linkage, places the function gear actuating pawl in a non-actuating position. Encountered next the spine holddown pads, caddy lockout assemblies, and front receiver pads are raised and lowered respectively to allow caddy (sleeve) entry. The spindle receiver is then raised, the side receiver pads lowered and the caddy (sleeve) sense switch S4 activated (closed) by the caddy (sleeve).

When the caddy sense switch, S4, is activated (closed), power is applied to the function motor. The caddy (sleeve) rollers begin to rotate, they grasp the caddy (sleeve) pulling it into the player. The caddy (sleeve) then activates (closes) the caddy reverse switch, S8. As caddy (sleeve) insertion nears completion the rear receiver pads are lowered, the caddy (sleeve) lock defeat tabs enter the end of the caddy (sleeve) on either side unlocking the spine tabs which hold the spine and Video Disc captive in the caddy (sleeve). At the same time the spine latch tabs, are pushed up and over the end of the spine and drop into their latching position holding the spine and Video Disc captive in the player. The spine sense switch, S5, is also activated (closed) at this time and the side indicator switch, S6, is either activated (closed) or left "off" (open) depending upon which side of the disc is being played. The function motor stops for approximately one (1) second before it begins running in the reverse mode (See Figs. 5 & 6).

With the function motor running in the forward mode the caddy (sleeve) rollers will be driven in the reverse mode. This causes the caddy (sleeve), now empty, to be ejected automatically to a point just beyond the caddy (sleeve) entry door where it must then be manually removed.

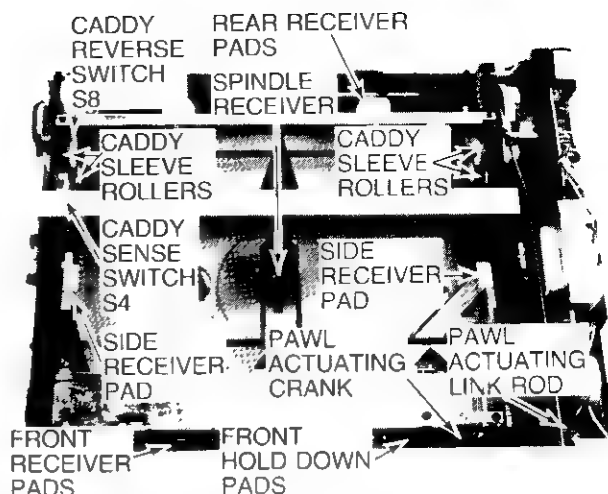


Fig. 5—Mechanism Identification

As the caddy (sleeve), now empty, begins its ejection travel from the player—the caddy (sleeve) lock defeat tabs (spring loaded) pop up above the spine to the position necessary for performing their function during the "unload" process. The rear receiver pads rotate up to their normal position to support the disc and spine. The caddy (sleeve) reverse switch, S8, is deactivated (opens), however the function motor continues to run. When the caddy (sleeve) is released by the caddy rollers it must then be manually removed from the player—the caddy sense switch, S4, is deactivated (opens), the side receiver pads (spring loaded) raise up to support the spine, the front receiver pads (spring loaded) raise and the spine holddown pads (also spring loaded) lower to support the disc and spine. The last item to be released is the Pawl Actuating Crank, which is used to prevent the function gear actuating pawl from being tripped during the time a caddy (sleeve) is in the player (See Figs. 5 & 6).

Note: The function motor, now controlled by the mechanism μ C, is still running in the forward mode.

Immediately upon release of the pawl activating crank the function gear actuating pawl is released, through mechanical linkage, and allowed to revert to its normal position. On the very next rotation of the pawl drive gear it strikes the function gear pawl placing the function gear

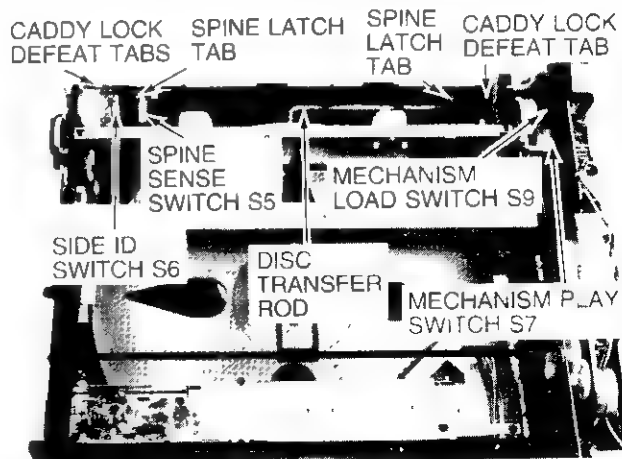


Fig. 6—Mechanism Identification

Continued next page

teeth in contact with the pawl drive gear teeth, thus driving the function gear through its rotation. As the function gear is driven through its rotation several mechanical functions occur (via cams which are an integral part of the function gear) that operate mechanical linkage. The rear receiver pads are moved back slightly and the front receiver pads are moved forward slightly to allow the disc to be lowered onto the turntable. The caddy (sleeve) entry door is closed, the disc is lowered onto the turntable by the Disc Transfer Rod and the mechanism play switch, S7 is activated (closed). With the activation (closing) of the mechanism play switch the turntable powers up and the arm assembly is moved into position over the disc, the stylus drops making contact with the disc producing picture and sound on the monitor television.

Note: A time lapse of approximately 10 seconds is required from turntable power up until picture and sound appear on the monitor TV.

Stylus Clean

The stylus is cleaned during the time the arm assembly is moved forward from its "home" position to its "play" position over the disc. The stylus cleaner pad is spring loaded and moves forward on an angle controlled by the arm assembly. About half-way through the forward movement of the stylus cleaner pad assembly the arm assembly hesitates (stops momentarily), the stylus is dropped and then the arm assembly and stylus cleaner pad continue their forward movement dragging the stylus across the cleaner pad in a parallel path cleaning the stylus. Almost immediately the stylus lifter circuit is activated lifting the stylus off the cleaner pad. When the stylus cleaner pad reaches the end of its travel the arm assembly continues its forward movement and positions itself over the disc at a predetermined starting point controlled electronically by activation of Landing Switch S10, contacts 1 & 2. The stylus is then dropped onto the disc to begin its function during the "Play" process (See Fig. 7).

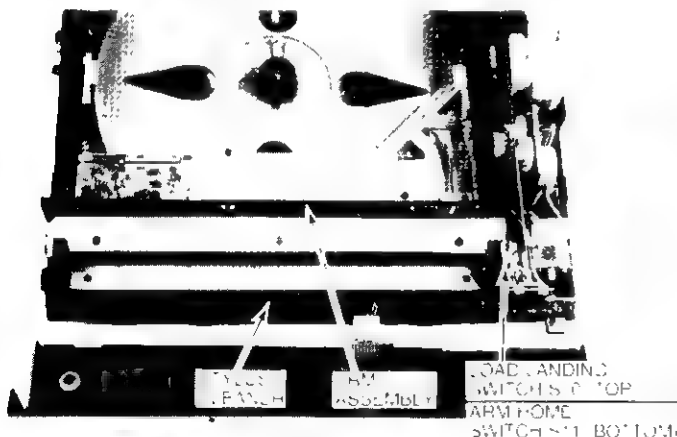


Fig. 7—Stylus Clean

Unload

At "end-of-play" the digital display will display a flashing "E" for a period of approximately four (4) seconds, then display a non-flashing "E" during the time the arm assembly is being returned to its "Home" position. When the arm assembly reaches its home (outermost) position, Landing Switch, S10, is deactivated (open) and Arm Home switch, S11, is activated (terms 1 & 3 closed). The stylus cleaner pad is also forced to its outermost position by the arm assembly and the turntable electronically seeks its locked position.

When the arm assembly reaches its Home position Arm Home switch, S11 opens permitting the function motor to be activated in the reverse mode. With the function motor running in the reverse mode the function gear is rotated through its cycle opening the caddy (sleeve) entry door through mechanical linkage, and the VideoDisc is raised to the "unload" position by the Disc Transfer Rod.

NOTE: There is a 5 minute time-out period in the "unload" mode. If the disc and spine is not removed during this period the disc is returned to the turntable and the player places itself in the "Pause" mode.

Insert empty caddy (sleeve) through the caddy (sleeve) entry port door in the same manner used when the player was loaded. The same series of events will occur as occurred during the "Load" sequence with the following exceptions. The caddy (sleeve) makes contact with the caddy lock defeat tabs (these are the tabs used to release the spine and VideoDisc from the caddy during the load process and sprang up when the caddy was removed) forcing them up over the caddy (sleeve) which in turn forces the spine latch tabs to release the spine. The spine and VideoDisc are forced into the empty caddy (sleeve) by the spine push back springs locking it securely. The caddy (sleeve), with the spine and disc locked securely inside, can now be safely ejected by the caddy rollers. When the caddy (sleeve) is removed past the caddy sense switch S4, the switch is deactivated removing power from the function motor. The player automatically reverts to the "Load" mode. At this time the loaded caddy may be turned over and re-loaded in the player to play the other side of the Video Disc. **DO NOT** leave the player in the "Load" mode for any extended period of time. Dust or other contaminants could enter the mechanism through the open caddy entry port door and cause damage to the unit (See Fig. 8).

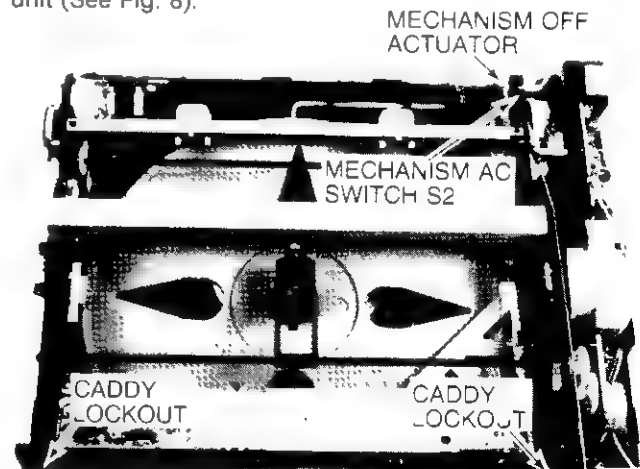


Fig. 8—Unload and Off

Off Position (Disc and spine removed)

Pushing the "OFF" button (to turn player off) makes the player think it has been loaded with a disc. The function motor runs in the forward mode operating the function gear which begins rotating as if to drop a disc on the turntable. However with no spine in the player the mechanism "OFF" actuator comes into play. At about half rotation of the function gear, a cam (an integral part of the function gear) forces the mechanism "OFF" actuator up against mechanism AC switch, S2, turning it off (open) removing AC power from the player. The same cam also operates

mechanical linkage which closes the caddy entry port door and holds the Lockouts and Pawl Actuating Crank rigid preventing insertion of a loaded caddy into the player in the "OFF" position (See Fig. 8)

Fig. 46 is a Functional Block Diagram of RCA VideoDisc Player model SJT400. The Front panel control buttons and digital display allow the user direct control of the primary functions of the player. In its primary functions, mode, SJT400 operates the same as the SJT 200/300 VideoDisc Players.

Most of the electronic circuits in model SJT400 can be separated into two (2) basic categories; PLAYER CONTROL and SIGNAL PROCESSING. One large Master Circuit Board contains the majority of electronic circuits for player control and signal processing while the PW 6100 circuit board assembly contains the RKM/Features/OSD electronic circuits (Fig. 31—is a Functional Block Diagram of the PW 6100 Features Circuit Board).

Three (3) microcomputer (μ C) integrated circuit devices are the heart of the player control function. The remote control μ C (RKM) which is located on the Features circuit board, accepts and decodes all input commands from the IR Remote transmitter (CRK36 or CRK32) and the user primary control buttons (located on the player itself).

After the input commands have been decoded and the corresponding output data extracted from the Features control software, the output commands are then transferred via unibus lines to the Features μ C. The Features μ C further processes the information and produces output data for On Screen Display, Side 1-Side 2 identification, antenna transfer and player control. The Feature μ C and the player μ C (located on the Main Circuit Board) then work together to control operation of the player. The Player Control μ C also decodes the **Digital Auxiliary Information (DAXI)** on the VideoDisc which is used by the Features μ C and Player Control μ C to control various functions of the player electronics and mechanism.

The signal processing circuits are equipped with several integrated circuits and discrete devices, the majority of which are mounted on the master circuit board assembly with the remainder being on the pick-up arm assembly. The signal processing circuits detect the video and audio information on the VideoDisc, demodulates it and processes it through a comb-filter circuit, and then modulates it onto either a channel 3 or channel 4 television RF carrier. This modulated television RF carrier signal is then connected through coaxial cable to any NTSC television receiver.

Functional Operation

Operation of the VideoDisc player is totally controlled by the combined efforts of the RKM, Features and Player Control microcomputer devices. When the user selects a mode of operation—be it by way of the IR remote system or the "On Player" primary function buttons—input commands related to that mode are fed to the RKM μ C. The RKM μ C decodes these input commands and develops digital data which is transferred to the Features μ C. The Features μ C decodes the digital data it receives from the RKM μ C and develops additional digital data. This data is then used to develop the on screen Display, Side 1/Side 2 indication, antenna transfer and to establish communications between the Features μ C and Player Control μ C (located on the master circuit board). The Player Control microcomputer decodes these input commands and, in turn, uses the decoded information to "direct" other player control electronics to establish the electrical conditions required to perform the selected mode of operation. The

state of all signal processing circuits is controlled by the Not Squelch (**NSQ**) output of the player control microcomputer. When the Not Squelch line goes to a logic "Lo" state, all of the signal-processing electronic circuits are disabled (squelched).

The player control microcomputer has direct control over the pickup arm assembly and the mechanism control microprocessor. This involves:—operation of the Function motor (to "Load" and "Unload" the player); — the turntable motor; — the arm drive (stepper) motor operation, moving the arm forward (Toward center of disc) during normal play — the stylus lifter operation, raising and lowering the stylus as the various functions are initiated; — and the stylus kicker circuits, enabling the system to provide the VISUAL SEARCH feature. The player control microcomputer also controls the direction of the arm drive (stepper) motor. In the HI SPEED SCAN REVERSE, and VISUAL SEARCH REVERSE operating modes, the microcomputer instructs the arm drive (stepper) motor to operate in the reverse mode. The player control microcomputer also generates the elapsed play time display. The time display information is developed from the Digital Auxiliary Information (DAXI) signal. This signal is pre-recorded on the VideoDisc on line 17 of each vertical field. The DAXI signal includes a field identification number that is decoded by the player control microcomputer. This decoded information is used by the microcomputer to develop the elapsed time display.

The signal processing electronics on the pickup arm assembly detect information recorded on the VideoDisc. The arm also contains components for providing the features of VISUAL SEARCH FORWARD and REVERSE as well as locked groove protection. They are: the "stylus kicker" coils which will cause the stylus to skip two grooves of the Video Disc; the "armstretcher" transducer which corrects for the timebase variations in the recovered chrominance and luminance signals. The arm assembly of VideoDisc player Model SJT 400 also contains an **in arm stylus sweeper** which is activated when the player goes into carrier distress (loses DAXI) and does so for a period of 3 seconds more. It is also activated each time the player is placed in the "Pause" mode.

The primary function of the pickup arm signal processing electronics is to detect the information recorded on the Video Disc. This is accomplished by modulating a 910 MHz VHF resonator circuit with the capacitance changes on the VideoDisc surface. The variations in capacitance on the VideoDisc surface causes the 910 MHz resonator center frequency to be modulated. This, in turn, amplitude modulates a fixed 915 MHz oscillator signal. The signal is then peak detected, with the resultant signal representing the capacitance variations on the VideoDisc. The signal is then preamplified and AFT controlled before being applied to the remaining signal processing electronics. The Arm Output (AO) signal contains the video and audio FM-modulated carrier information and all of the information (DAXI) necessary for player control.

The AO signal is applied to the Main Circuit Board assembly where it is distributed to the player control electronics, the video signal processing electronics, and the audio processing electronics.

In the signal processing electronics of the stereo VideoDisc player the AO signal is applied to three (3) FM demodulator ICs. One (1) for video processing and two (2) for audio processing.

In the case of a Monaural VideoDisc a single audio track is imprinted on the disc at 716 kHz. In the case of a stereo or bilingual VideoDisc two (2) audio tracks are imprinted on the disc. One at 716 kHz, the other at 905 kHz

Before the AO signal is applied to the Video Demodulator IC, it is passed through a Non Liner Aperture Correction (NLAC) circuit. The NLAC circuit removes the 716 kHz audio modulation from the video information. It does this by phase inverting the audio modulation, and then adding it back to the original signal. This cancels out the 716 kHz audio modulation in the carrier information. The video FM carrier, with the 716 kHz audio modulation removed is then applied to the Video demodulator IC and a Pulse Interference Corrector (PIC) circuit.

The purpose of the Pulse Interference corrector (PIC) circuit is to prevent radar and other strong RF pulses in the 900 MHz range from interfering with the operation of the VideoDisc Player. The PIC circuit detects the presence of such pulses and instructs the defect corrector in the Comb Filter and Defect Corrector integrated circuit to substitute the previous line of video information.

The Video Demodulator IC, which demodulates the video carrier, also contains a defect detector circuit used to activate the defect corrector in the comb filter IC. Thus allowing a portion of the previous horizontal line to be inserted when a defect caused by loss of carrier occurs. The output of the video demodulator, being composite video with "buried" subcarrier chroma, is then applied to a comb-filter circuit. The comb-filter dynamically separates chrominance and luminance information from the composite video information. The output of the comb filter is "combed" chrominance and "combed" luminance. The combed chrominance output signal contains low frequency luminance information and the DAXI signal which is transmitted with each vertical field. After bandpassing the 1 to 2 MHz chroma signal, the two remaining signals (low frequency luminance and DAXI) are separated by low pass filters. The low frequency luminance information is recombined with the "combed" luminance information to provide the luminance output. Vertical Detail Output (VDO) containing the DAXI signal is supplied via the DAXI buffer IC to the player control microcomputer.

The luminance and chrominance information is coupled from the comb-filter circuit to the video converter circuit. The video converter up-converts the 1.53 MHz chrominance information to 3.58 MHz. The 3.58 MHz chroma and the luminance information are then combined. The resultant composite video signal is then supplied to the RF modulator where the demodulated audio signal is added and a RF signal on channel 3 or channel 4 is developed for output to a standard NTSC television receiver.

Also developed in the video converter stage is the drive signal for the "Armstretcher" time base corrector circuit. The correction signal is developed by comparing the up converted 3.58 MHz chroma information with a crystal controlled 3.58 MHz reference oscillator. Any phase or frequency difference between the two signals develops an error signal which is applied to the arm-stretcher circuit. The armstretcher circuit operates a solenoid (located on the pick up arm assembly) moving the stylus (laterally with respect to the disc) to maintain a constant disc to stylus velocity. The armstretcher circuit output is also coupled to the converter oscillator (5.11 MHz VCXO) in order to maintain phase lock between the up converted 3.58 MHz color signal and the crystal controlled 3.58 MHz reference oscillator.

A Video Noise Coring circuit is used in conjunction with the video converter circuit to eliminate high frequency signals below 5 IRE peak-to-peak from the composite video output signal. The "combed" luminance signal is capacitively coupled to a noise coring amplifier stage where it is inverted. The inverted signal is then direct coupled to

a non-inverting noise coring buffer stage. The non inverted signal is coupled back to the input circuit of the noise coring amplifier stage through a coring circuit consisting of a coupling capacitor and two (2) coring diodes. This represents a negative feedback of all signals above 5 IRE peak-to-peak which is 180 degrees out-of-phase with the incoming signal. Therefore all signals above 5 IRE will be cancelled at the input of the noise coring amplifier stage. Hence, the signal at the output of the noise coring buffer stage will contain only signals below 5 IRE peak-to-peak. This signal is then added, 180 degrees out-of-phase to the composite video signal from the video converter IC. The result being elimination of high frequency signals below 5 IRE peak-to-peak from the composite video output signal, thus reducing high frequency noise in the video information.

Audio Signal Processing

As previously stated, in the case of a monaural VideoDisc a single audio track is imprinted on the disc at 716 kHz. The AO signal is applied to a Band pass filter which passes only the 716 kHz audio FM information. This information then is applied to the 716kHz Audio FM Demodulator IC. After demodulation the signal is coupled to a Sample and Hold CMOS switching IC. The audio signal then is capacitively coupled to the RF Modulator circuit.

In the case of a Stereo or Bilingual VideoDisc two (2) separate audio tracks are imprinted on the disc—one at 716 kHz the other at 905 kHz. The AO signal is applied to two (2) Band Pass Filters one of which passes only the 716 kHz audio signal and the other passes only the 905 kHz audio signal. The audio signals are then applied to two (2) audio demodulator IC's. The 716 kHz signal is processed by the (L+R) audio demodulator IC and the 905 kHz is processed by the (L-R) audio demodulator IC.

The signals are then routed through a TRACK/HOLD and MUTE CMOS Switching IC. The (L+R) signal is applied to a non-inverting OP Amp and then to the base of the Right and Left channel audio buffer stages. The (L-R) is applied to a non-inverting OP Amp and then to the base of the Left channel audio buffer stage. It is also applied to an inverting OP Amp, which provides the necessary inversion of the (L-R) signal, the output of which is applied to the base of the right channel audio buffer stage.

Separation takes place in the base circuit of the left and right channel audio buffer stages. With both (L-R) and (L+R) signals present at the base of the left channel audio buffer the right channel information is cancelled leaving only the left channel information at its output. Likewise with both $-(L-R)$ and (L+R) signals present at the base of the right channel audio buffer the left channel information is cancelled leaving only the right channel information at its output.

The output of the left and right audio buffers (now separated audio) is applied to three (3) circuits. First is the transconductance audio output amplifier IC; second the right and left audio signals are applied to the noise reduction decoder circuit which generates a gain control signal and couples it back to the transconductance audio output amplifier; third, the right and left audio signals are summed together and coupled via the CMOS switching IC to the RF modulator circuit. After final amplification by the audio output IC the audio signals are then de-emphasized and applied to their respective audio output jacks.

The ON or OFF state of the Track/Hold and Mute electronic CMOS switching IC is electronically determined by the DAXI code imprinted on the VideoDisc being played.

Continued next page

In the case of a monaural disc the portions of the CMOS switch controlled by pins 5, 6 & 13 (pins 5, 6 & 13 go to high state) will be activated allowing the 716 kHz (or right channel audio) to be passed for processing. In the case of a stereo disc the portions of the CMOS switch IC controlled by pins 5, 6 & 12 (pins 5, 6 & 12 go to high state) will be activated allowing both the 716 kHz (right channel audio) and 905 kHz (left channel audio) to be passed for processing. In the case of a bilingual Video Disc the state of the CMOS switches depends on which audio channel you choose to operate. If you choose to operate primary channel "A", CMOS switching IC pins 5, 6 and 13 will be "high" allowing only channel "A" (716kHz) information to be passed for processing. If you choose secondary channel "B", CMOS switching IC pins 12 and 13 will be "high" allowing only channel "B" (905 kHz) information to be passed for processing.

Muting is accomplished by placing pins 5 and 12, of the CMOS switching IC, in a "low" state thereby opening their respective switch sections.

Decoder Operation

The original Stereo audio signal stamped onto the VideoDisc is compacted from a dynamic range of (+12db to -40db) to (+6db to -20db) for recording on the disc itself. To reproduce the original stereo audio signal a decoder system has been incorporated in the "Stereo" VideoDisc Player audio signal processing circuitry. The audio signal from each channel is coupled via a 100 Hz high pass filter into a pair of Op Amps. One is an inverting amp the other noninverting. All four of these Op Amps, tied together at their outputs, perform like a full wave rectifier. Another Op Amp, whose output is controlled by a fixed bias, sets the output of the rectifier stages. This permits a maximum signal expansion of (-20db) changed to (-40db) point level. The output of the rectifier Op Amps is then coupled to a decoder Op Amp (works like a filter) whose output is applied to another decoder Op Amp (a DC amp) creating a variable DC voltage at its output. This variable DC voltage is then processed by a time constant network which performs the actual decoding function.

The output of the time constant network is then applied to an additional Op Amp. The output of this Op Amp (also a variable DC voltage) is used to control the current flow through a Current source transistor. The output of the current source transistor then is used to control the gain of the transconductance amplifier stages for both the Left and Right Channel audio output.

Note: The decoder circuit is operational only when playing a Stereo encoded (compacted) VideoDisc. When a monaural or bilingual VideoDisc is being played a fixed bias is applied to the Op Amp immediately preceding the decoder time constant network. This in turn places a constant bias on the Transconductance amplifier stages in the Audio Output Integrated Circuit.

On Screen Display

The SJT400 provides on screen display information prompting the user during operation of the instrument. Player video information, after processing by the video converter IC on the master circuit board, is applied to a video mixer stage on the PW 6100 circuit board. Horizontal sync pulses (also processed by the video converter IC), Vertical sync pulses (processed by the DAXI buffer IC) and Video blanking pulses (processed by the Player Control μ C) are also applied to the On Screen Display microprocessor. A composite Video signal is output by the video mixer stage which is then applied, via video amp and buffer stages, to the RF modulator.

Video Output

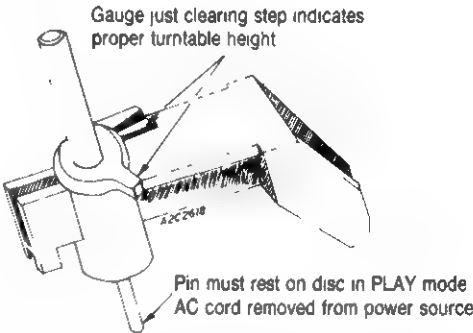
Video Output is provided on the SJT400 Random Access VideoDisc player. The composite video signal is tapped off, just prior to being applied to the RF Modulator stage, and applied to a Video buffer stage. The output of the Video Buffer stage is connected to a video output jack on the rear of the player. This provides a 1V p-p video output signal when terminated with a 75 ohm load.

TURNTABLE HEIGHT ADJUST

To check turntable height—With disc in player in "Play" mode remove AC cord from power source. Remove stylus cartridge and store in safe place. Insert turntable height gauge (see replacement parts list for Stock No.). Hold height gauge in Arm Assembly firmly. Be sure height gauge plunger is free to indicate properly (see illustration).

- 1. If gauge plunger remains on lowest step—raise turntable height by adjusting height adjust screw (Item 99, Fig. 47) clockwise.
- 2. If gauge plunger moves to highest step—lower turntable height by adjusting height adjust screw counterclockwise.
- 3. Proper turntable height—when gauge plunger passes over lowest step on gauge and does **not** pass over highest step.

CAUTION: Use old disc or reserve one side of test disc for this adjustment. DO NOT use a good disc for this procedure.



Turntable Height Gauge

Note: Turntable height adjust screw is an Allen head screw accessible from the bottom with a (1/8") Allen wrench. Some instruments may use a locking screw (same size). First try turning screw clockwise, if screw will not turn with slight pressure the instrument uses a locking screw which must be removed to accomplish turntable height adjust. Replace locking screw when adjustment is complete.

Cabinet Top Removal

- 1 Place instrument in "off" mode—remove power plug from 120V AC power source
- 2 Remove two (2) pozi drive (+ head) screws Fig. 2
- 3 Grasp cabinet top at bottom edge on either side (towards the rear) Pull up and to the rear freeing cabinet top front lip from under the front panel and remove cabinet top
- 4 To reassemble—reverse procedure.

Front Panel Removal

- 1 With cabinet top removed and player in "LOAD" mode—remove AC cord from power source. Use needle nose pliers and carefully remove door push rod spring from front receiver pad (left and right sides) Fig. 9.
- 2 Grasp front panel along top rear edge—lift rear edge slightly and pull front panel away from player.
- 3 Remove flex cable plastic cover, disconnect flex cable connector and remove front panel
- 4 To reassemble—reverse procedure

Note: When removing front panel it is necessary that the arm assembly be placed in its forward most position. See stylus cartridge removal for procedure. Be certain, during reassembly that the Flex cable and plastic cover are properly seated.

Bottom Cover Removal

- 1 If cabinet top has been removed remove receiver spindle assembly (Fig. 14), also remove stylus car-

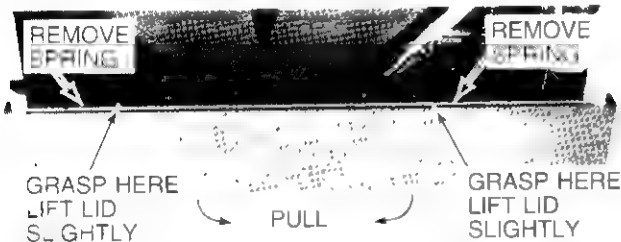


Fig. 9—Door Push Rod Spring

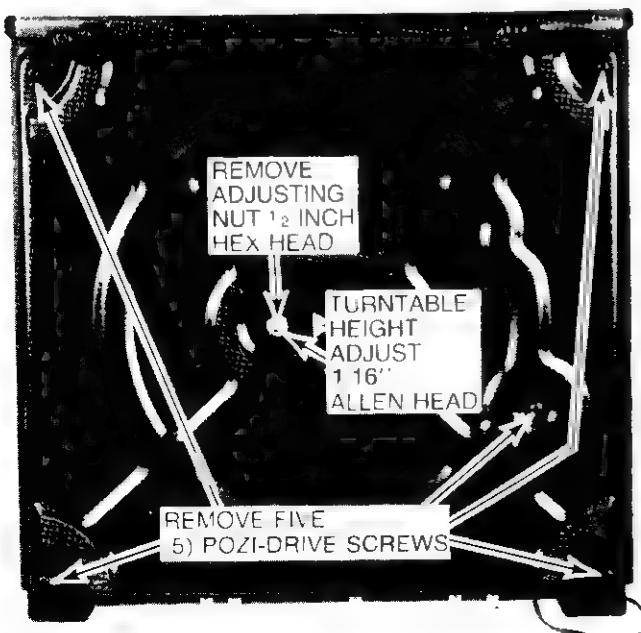


Fig. 10—Bottom Cover

tridge and store in safe place Place instrument bottom up, on workbench with soft surface

- 2 Remove adjusting nut (1/2 inch Hex Head) and reinforcing plate (1/4" washer) from center of bottom cover.
- 3 Remove five (5) pozi drive (+ head) screws Fig. 10
- 4 To replace—reverse procedure

Note: When replacing Bottom Cover—just start adjusting nut and screws. Properly seat Bottom Cover then. (a.) tighten screws (b.) tighten adjusting nut.

Master Circuit Board and PW 6100 Removal/Service Position

1. Remove cabinet top and receiver spindle assembly, and stylus cartridge place instrument bottom up on workbench with soft surface. Remove bottom cover
2. Remove thirteen (13) pozi-drive (+ head) screws Fig. 11.
3. Remove main circuit board and PW 6100 by lifting front edge up to approximately a 10° to 15° angle, so as to clear all obstacles, then move board forward towards front of instrument until antenna connectors clear rear edge of base plate
4. After circuit boards are clear of baseplate rotate boards horizontally 90° and lay beside instrument
5. Turn bottom plate over and fasten in position on baseplate with center adjusting nut and reinforcing plate (1/4" washer)

Note: Bottom plate must be installed in prescribed manner to operate instrument in service position

6. Place instrument and circuit board in upright position (Fig. 12), reinstall receiver spindle assembly and if front panel was removed reconnect front panel flex cable to flex cable connector Instrument is now in operational service position
7. To reassemble—reverse procedure.

Caution: Replace circuit board mounting screws only in holes from which they were removed (Fig. 11).

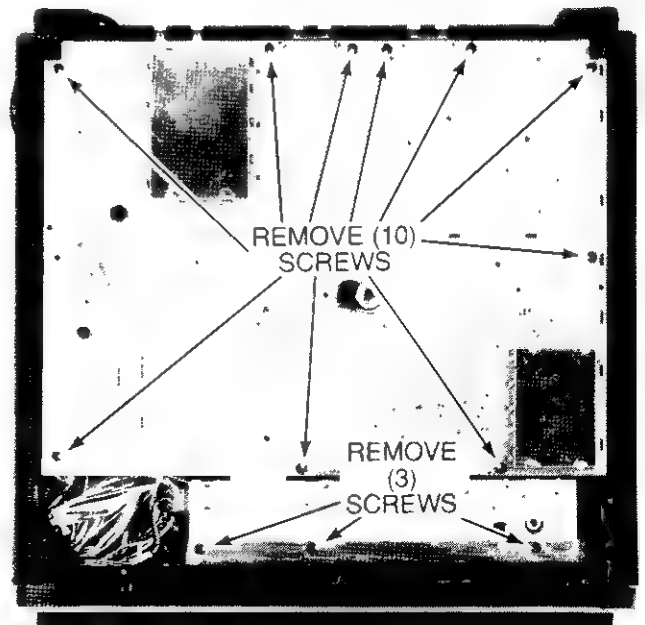


Fig. 11—Master Circuit Board

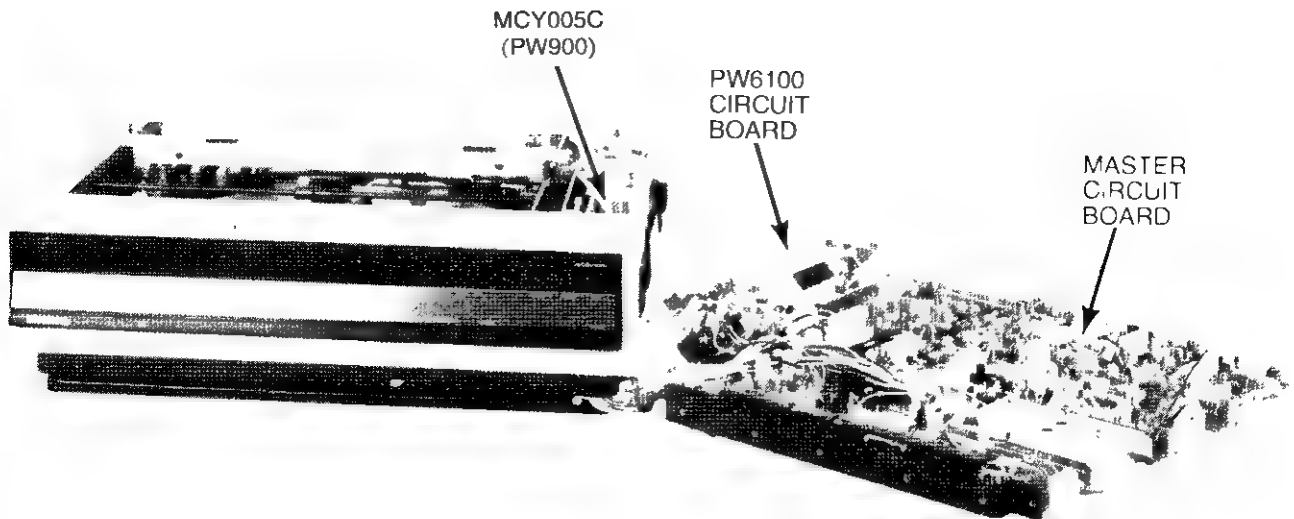


Fig. 12—Service Position

Arm Drive Assembly Disassembly

1. With cabinet top and front panel removed—remove one (1) pozi-drive (+ head) screw Fig. 13.
2. Unsolder and remove Brn. and Wht/Brn wires from radius sense control.
3. Remove stepper motor from arm drive assembly by removing two (2) small pozi-drive (+ head) screws and lay stepper motor to the side out of the way.
4. Move arm drive assembly toward center of player and lift up to remove from player.
5. To replace any gear—first remove wire nut from 3rd reduction gear mounting stud and remove 3rd reduction gear. The 2nd and 1st reduction gears are now accessible.
6. To reassemble—reverse procedure. Be certain ESD ground spring is dressed to the outside of stepper motor mounting screw.

Note: After replacing arm drive assembly—apply power to player. "Load" player with a Video Disc and *rapid access* arm assembly to its *innermost* position. Reject player and unload Video Disc. If a clicking noise is heard during this procedure—disregard—the radius sense control gear is resetting itself. Be certain during this procedure that the arm assembly does indeed reach its innermost and arm home positions.

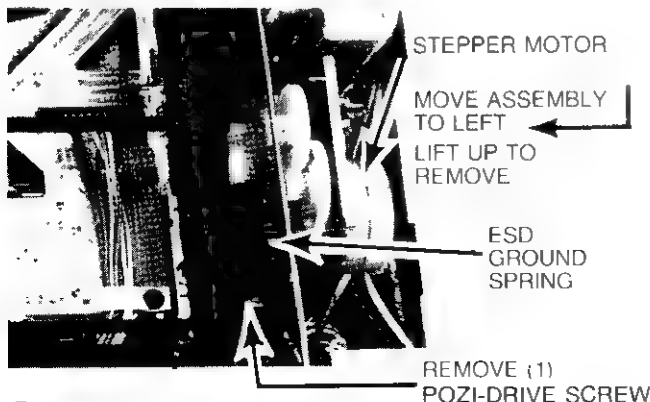


Fig. 13—Arm Drive Assembly

Stylus Cartridge Removal

1. With cabinet top removed—remove AC plug from power source.
2. Using thumb—rotate 2nd reduction gear (Fig. 14) in counter clockwise direction moving the arm assembly to a point where the stylus cartridge access cover (lid) is accessible.
3. Using a small blade screwdriver—unlatch stylus cartridge access cover (lid) latch spring and open access cover (lid).
4. Using thumb and forefinger—grasp stylus cartridge and push it slightly to the right against the arm-stretcher coil assembly. With a rocking motion lift left end of cartridge slightly, then lift cartridge straight up and out of arm assembly.
5. To replace—reverse procedure.

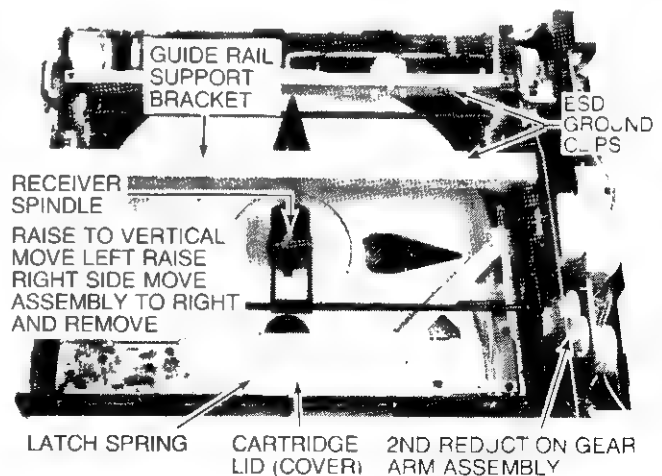


Fig. 14—Stylus Cartridge and Receiver Spindle

Receiver Spindle Assembly Removal

1. With cabinet top removed—rotate receiver spindle assembly to a vertical position (Fig. 14)

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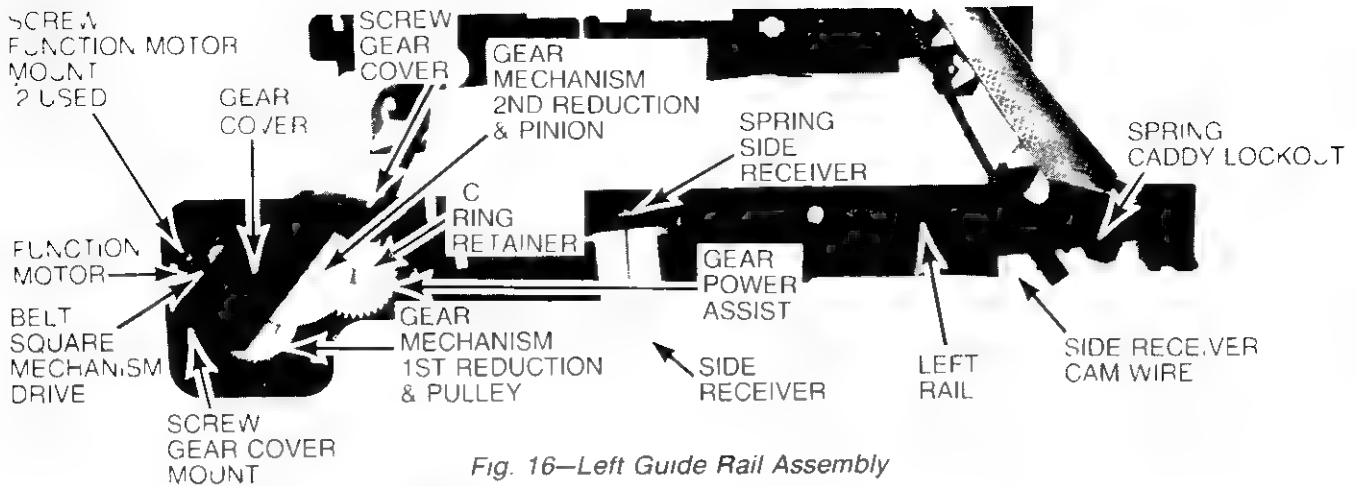


Fig. 16—Left Guide Rail Assembly

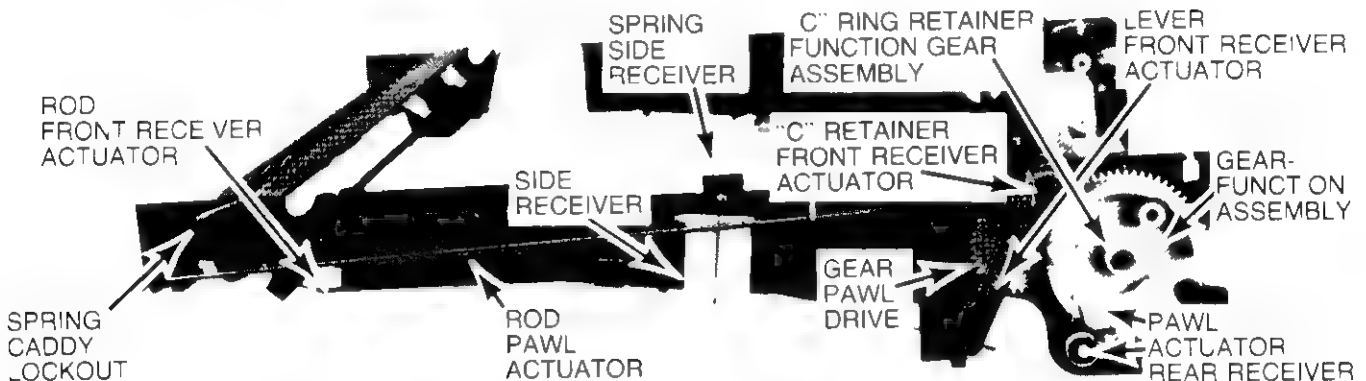


Fig. 17—Right Guide Rail Assembly

pawl out of the way and position function gear to clear receiver actuator. Remove function gear and then the receiver actuator.

4. Remove side receivers (one each side)—release spring and rotate receiver to 45° angle. Slide receiver toward front of rail assembly and remove from rear mounting bracket by angling rear of receiver away from rail, slide receiver toward rear of rail assembly to complete removal.
5. Remove receiver actuator rod (Fig. 17) from right rail assembly and side receiver wire cam (Fig. 16) from left rail.
6. Remove retaining ring holding pawl drive gear (Fig. 17) captive—remove pawl drive gear.
7. Remove retaining ring holding the power assist gear (Fig. 17) captive. Remove power assist gear.
8. Remove caddy lockout springs (Figs. 16 & 17) right and left sides. Remove caddy lockouts (Figs. 16 & 17).
9. To separate the Left and Right rail assemblies the cabinet support bracket (Fig. 18) and the pivot support bracket (Fig. 18) must be removed.
10. Use small blade screwdriver (approximately 1/8")—slip between plastic overlap of rail assembly and top of cabinet support bracket and pry up to remove bracket. Repeat same procedure at rear of pivot support bracket.

CAUTION: Some pressure must be exerted during this procedure, however care must be taken to avoid breaking plastic rail.

Note: Brackets simply snap into place during replacement.

11. Remove spacer (Item 52, Fig. 47) from right rail assembly (holds spine hold down assembly in place on right rail assembly). Remove spine hold down assembly (Item 53, Fig. 47).
12. Remove power assist hub assembly (Item 32, Fig. 47) and front receiver pad assembly (Item 51, Fig. 47).
13. To reassemble—reverse procedure.

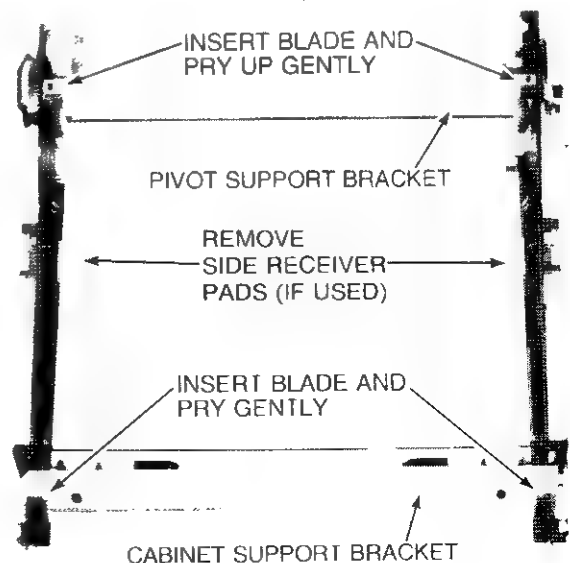


Fig. 18—Guide Rail Assembly

Rear Receiver Pad Assembly Removal

- 1 With guide rail assembly and turntable removed—release tension on rear receiver pad assembly torsion spring (Fig. 19) and remove wires to switch S8 from wire guide stud. Move switch and wire out of the way.
- 2 Lift rear receiver pad assembly (Fig. 19) straight up and remove from baseplate
- 3 To replace—reverse procedure.

Note: Before replacing rear receiver pad assembly in position apply one (1) full turn of tension to torsion spring

Caddy Defeat and Spine Latch Assembly Removal

- 1 With guide rail assembly removed—release caddy defeat springs (Fig. 19) from baseplate studs
- 2 Remove spacer clip (Fig. 19) from caddy defeat and spine latch assembly
- 3 Slide caddy defeat and spine latch assembly (Fig. 19) to right—raise left side of assembly to clear mounting stud and slide assembly to left to remove.
4. To replace—reverse procedure

Disc Transfer Rod Removal

- 1 With Guide Rail, Rear Receiver Pad and Caddy Defeat/Spine Latch assemblies removed—release Transfer Rod spring (Fig. 19) from baseplate stud
- 2 Rotate Transfer Rod (Fig. 19) upward to clear center portion of baseplate
3. Move Transfer Rod to the left to clear far right mounting stud. Rotate rod toward rear of player to clear next mounting stud and continue moving rod to the left
4. After the first large mounting stud has been cleared by transfer rod, guide left portion of rod up and toward rear of player. Drop right portion of rod into trough molded into baseplate.
5. Using an upward arcing motion continue moving rod until it can easily be lifted up and out of the center baseplate mounting studs

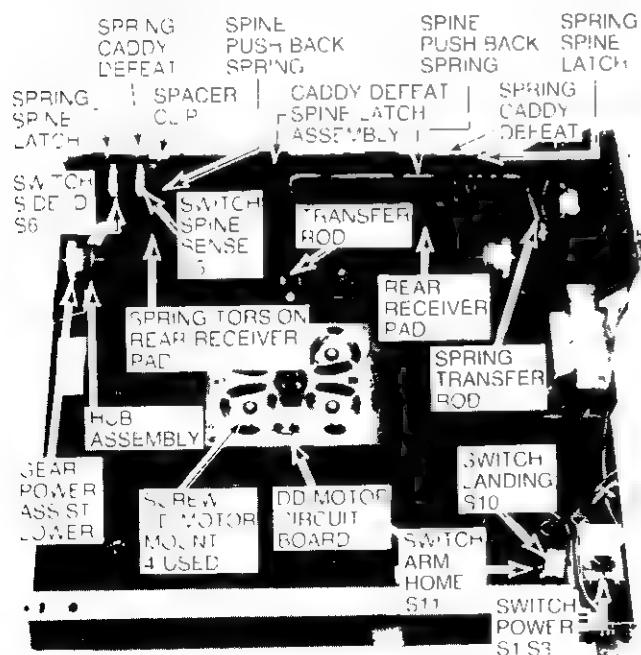


Fig. 19—Miscellaneous Disassembly

- 6 To replace—reverse procedure

Note: No force is required to remove or replace the disc Transfer Rod

Turntable Removal

- 1 With cabinet top, receiver spindle assembly and guide rail bracket removed use thumb to rotate mechanism drive 2nd reduction gear (Fig. 16) in clockwise direction to place mechanism in "PLAY" mode while holding AC switch (S2) actuator (Item 47, Fig. 47) back out of the way. Immediately stop rotating mechanism 2nd reduction gear when Disc Transfer Rod Coupler (Item 38, Fig. 47) activates "PLAY" Switch S7 (forwardmost switch mounted on plastic AC IN board mounting bracket beside mechanism function gear
- 2 Rotate turntable to center solid port on of turntable over transfer rod (two holes in turntable at 45° angle with respect to rear edge of player).
3. Lift up on turntable and angle front edge of turntable to clear front receiver pad and remove turntable from player on an angle
4. To replace—reverse procedure.

Note: When replacing turntable—be certain to check magnet and turntable well for debris

CAUTION: There is a thrust plate (Item 102, Fig. 47) used in the turntable bearing. Be sure that it is in place before replacing turntable. Do not turn player upside down during servicing without turntable in place, it could result in possible loss of the thrust plate.

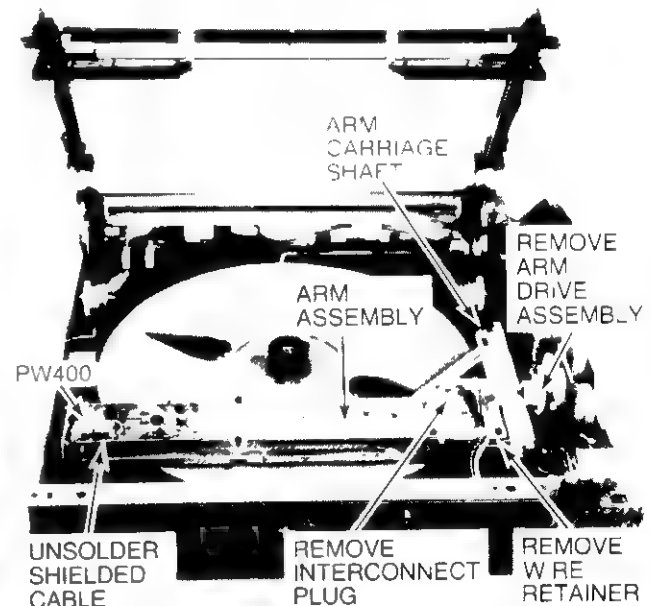


Fig. 20—Turntable and Arm Assembly

Arm Assembly Removal

- 1 With cabinet top, cabinet front and receiver spindle removed—remove cabinet support bracket ESD ground spring from left front corner
2. Remove ground clips from guide rail bracket and pivot support bracket. Remove stylus cartridge from arm assembly and store in safe place
- 3 Remove Arm Drive Assembly from baseplate and move to the side out of the way
4. Remove three (3) pozi-drive (+ head) screws holding

Continued on next page

guide rail assembly and lift assembly to 45° angle. (Fig. 20).

5. Unsolder shielded AO cable from PW 400, arm preamp circuit board. Remove cable strap and P 101 from arm interconnect circuit board.
6. Lift Arm Carriage Shaft (Fig. 20) from its rear baseplate mounting and pull it loose from its front baseplate mounting.
7. Remove Arm assembly from player.
8. To replace—reverse procedure.

PW 200 Resonator Removal

1. Remove stylus cartridge and store in safe place.
2. Remove two (2) pozi-drive (+ head) screws holding resonator captive and remove stylus cover latch spring (Fig. 21).
3. Unsolder three (3) wires connected to feed-thru studs on resonator.
4. Lift resonator up to remove from Arm Assembly.
5. To replace—reverse procedure.

Lifter Actuator Assembly Removal

1. Remove cartridge cover and stylus cartridge. Place stylus cartridge in safe place.
2. Remove two (2) lifter pivot retaining clips—one (1) each side of arm assembly (Fig. 21).
3. Remove Lifter Actuator assembly.

4. To replace—reverse procedure.

Note: See *Stylus Lifter Alignment* page 69.

Armstretcher Coil Removal

1. Remove arm assembly from player and place on solid flat surface.
2. With Lifter Actuator removed — unsolder leads from Armstretcher Coil (observe polarity).
3. Break push on retainers and remove Armstretcher coil.
4. To replace, reverse procedure (new push on retainers required).

Note: See Arm Assembly schematic for Armstretcher Coil basing.

Kicker Coil Replacement

1. Remove arm assembly from player and place on solid flat surface.
2. With Lifter Actuator removed — unsolder leads from Kicker Coil (observe polarity).
3. Break push on retainers and remove kicker coil assembly.
4. To replace, reverse procedure (new push on retainers required).

Note: See Arm assembly schematic for Kicker Coil basing.

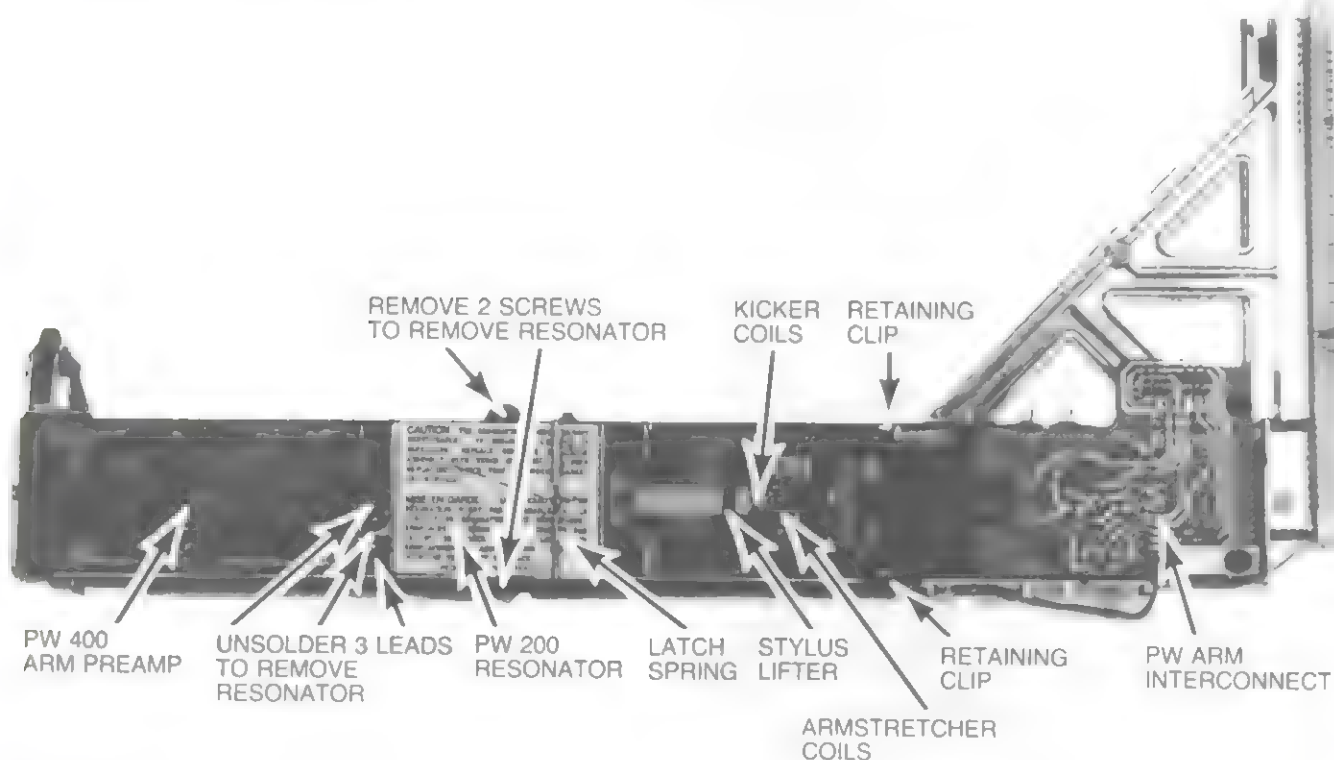


Fig. 21—Arm Assembly

**Test Equipment
Required:****Digital Voltmeter****Oscilloscope****Frequency Counter****VideoDisc****Color TV Receiver****Marker Generator****Alignment Tools****Specifications**Range 1V DC to 30V DC
Accuracy $\pm 1\%$ Triggered
Response: DC – 20 MHz
Sensitivity: 5mV/cm
Maximum Sweep Rate .1 μ S/cmRange: 50 Hz to 100 MHz.
Sensitivity: 25mV to 5VStereo Alignment Disc: See Replacement Parts List for
Stock No.

Standard NTSC

Range: Crystal Calibrated from 19 to 262 MHz.

2.5mm non-metallic female
Hex Head adjustment tool
(see replacement parts list for Stock No.)
.056" square end tool GC9440 or equivalent
.100" hex end tool GC8606 or equivalent
insulated blade tool GC8722 or equivalent

ELECTRICAL ADJUSTMENTS**Note:** Use only the Stereo Alignment (TEST) Disc (see replacement parts list for stock no.) to perform the following adjustments.**5V Reference Adjust (R2020)**

1. Apply power to player and place in "Load" mode.
2. Connect DC Voltmeter to TP 2003 (Fig. 26).
3. Adjust R2020 for 5.0V DC \pm .05V DC (Fig. 28).

3.58 MHz Reference Oscillator Adjust (C5902)

1. Connect frequency counter via X10 probe (see note) to TP 3406 (Fig. 26).
2. With player in "Load" mode adjust C5902 for 3.579545 \pm 10 Hz (Fig. 27).

Note: Typical capacity of X10 probe and counter is approximately 20-25pf. A X1 probe (typical capacity of approximately 100pf) may be used with a 33pf capacitor placed in series with probe.**NLAC (DC Balance) Adjust (R3131)**

1. Place player in "Pause" mode.
2. Connect DC Voltmeter to TP 3101 (Fig. 26).
3. Adjust R3131 to produce a 10.5 \pm 0.5 V.D.C. reading (Fig. 28)

Video Demodulator VCO Adjust (C3215)

1. Apply power to player
2. Disconnect interconnect plug P4 (A0)
3. Short the two pins of J4 together.
4. Connect frequency counter via X10 probe (see note) to TP 3102 (Fig. 26)
5. Adjust C3215 for 5.25 MHz \pm 50 KHz (Fig. 28).
6. Remove short from the two pins of J4 and reconnect P4

Note: Typical capacity of X10 probe and counter is approximately 20-25pf. A X1 probe (typical capacity of 100 pf) may be used with a 33pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25pf.**Video Level Adjust (R3202)**

1. Place player in "Play" mode.
2. Use stereo alignment disc 100 IRE white field signal (Segment E).
3. Connect oscilloscope to TP 3410 (Fig. 26).
4. Adjust R3202 (video level adjust) to produce 2.8Vp-p response at TP 3410 (Fig. 28).

Luminance Channel Null Adjust (R3328)

1. Place player in "Play" mode.
2. Use stereo alignment disc color bar signal (Segment D).
3. Connect oscilloscope to TP 3302 (Fig. 26).
4. Adjust R3328 for minimum (null) chroma information. See Figs. 22 & 28

**INCORRECT****CORRECT***Fig. 22—Luminance Null*

Chroma Channel Null Adjust (R3329)

1. Place player in "Play" mode
2. Use stereo alignment disc color bar signal (Segment D)
3. Connect oscilloscope to TP 3303 (Fig. 26)
4. Adjust R3329 for minimum p-p signal see Figs. 23 & 28

Note: Repeat Video Level Adjustment after completion of Luminance Channel Null and Chroma Channel Null adjustments

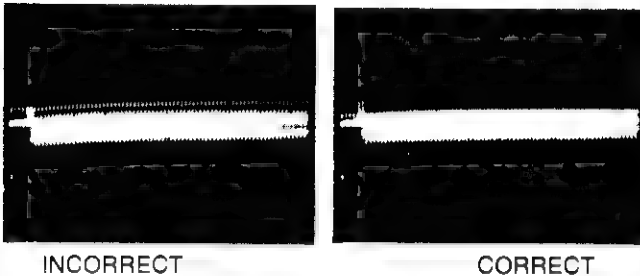


Fig. 23—Chroma Null

Vertical Detail Level Adjust (R3317)

1. Place player in "Play" mode.
2. Use stereo alignment disc color bar signal (Segment D)
3. Connect oscilloscope to TP 3404 (Fig. 26)
4. Adjust R3317 so that the pulse level matches before and after transition from vertical equalizing pulses to vertical sync pulses see Figs. 24 & 28.

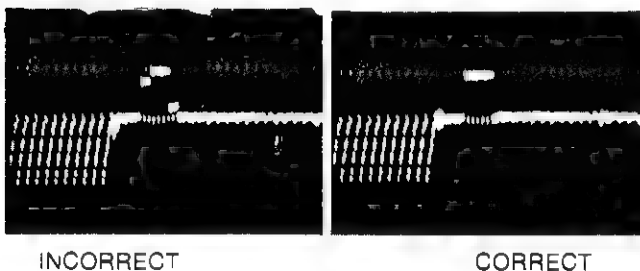


Fig. 24—Vertical Detail Level

Chroma Level Adjust (R3312)

1. Place player in "Play" mode.
2. Use stereo alignment disc color bar signal (Segment D).
3. Connect oscilloscope to TP 3410 (Fig. 26)
4. Adjust R3312 so that the p-p level of color reference burst is 1V p-p see Figs. 25 & 28

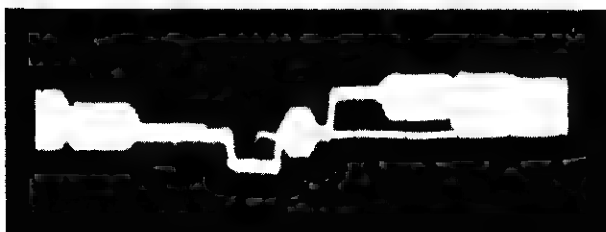


Fig. 25—Chroma Level

Defect Substitution Level (Delayed Video) Adjust (R3304)

1. Place player in "Play" mode
2. Use stereo alignment disc 5 step linearity with defect (Segment).
3. Connect disc player to TV set. Locate defect (Line No 130) by rotating R3304 to one end of rotation (Fig. 28)
4. Adjust R3304 for proper substitution to make defect disappear (adjust for best picture).

VCXO Adjust

1. Place player in "Pause" mode
2. Apply +5V to U3402 Pin 1.
3. Connect DVM from TP 3402 to ground (Fig. 26)
4. Connect 4.7 MΩ resistor from TP 3412 (U3401 Pin 6) to +15V DC source and record voltage V1 measured on DVM at TP 3402 (Fig. 26).
5. Remove 4.7 MΩ resistor end from +15V source and connect it to ground.
6. Record voltage measured on DVM as V2. Remove grounded end of 4.7 MΩ resistor leave one end connected to TP 3412 (Fig. 26)
7. Using the formula $\Delta F = 3/2 (V1 - V2 - .177) \text{ kHz}$, calculate ΔF . (The result should be between 1.90 and 2.52 kHz.)

Example: $\Delta F = 3/2 (8.66V - 7.09V - .177) \text{ kHz}$

$$\Delta F = 3/2 (1.393) \text{ kHz}$$

$$\Delta F = 1.5 \times 1.393 \text{ kHz}$$

$$\Delta F = 2.09 \text{ kHz}$$

Note: The voltages shown in solving the formula to determine ΔF are example voltages — actual measured voltages (V1 & V2) will have to be substituted

8. Calculate high frequency limit $fH = 1535.625 + \Delta F \text{ kHz}$

Example: $fH = 1535.625 \text{ kHz} + 2.09 \text{ kHz}$

9. Calculate low frequency limit. $fL = 1535.625 - \Delta F \text{ kHz}$

Example: $fL = 1535.625 \text{ kHz} - 2.09 \text{ kHz}$

10. Connect frequency counter via X10 probe to TP 3407.

Note: Typical capacity of X10 probe is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor if placed in series with probe.

11. Remove +5V from U3402 Pin 1
12. Adjust L3403 for $1.534091 \pm 100 \text{ Hz}$ (Fig. 28)

CAUTION: 4.7 MΩ resistor must be open at one end to make this adjustment

13. Connect 4.7 MΩ resistor from TP 3412 to +15V source. With player in "Play" mode, release pause mode. Frequency indicated on frequency meter should be $\pm 100 \text{ Hz}$ of previously calculated fH (EXAMPLE $1537.715 \text{ kHz} \pm 100 \text{ Hz}$). If not, adjust R3412 to achieve the previously calculated fH

14. Remove 4.7 MΩ resistor from +15V source and place player in "Pause" mode. Check that frequency on fre-

Continued next page

quency meter is $1\ 534\ 091 \pm 100$ Hz. If not, adjust L3403.

15. Connect 4.7 M Ω resistor from TP 3412 to ground. With player in "Play" mode, release "Pause" mode. Frequency indicated on frequency counter should be ± 100 Hz of previously calculated fL (Example 1533 445 kHz ± 100 Hz). If not, adjust L3402 to remove approximately 1/2 of the frequency error and adjust R3412 to remove the remainder.
16. Repeat Steps 13-16 until limits of each are met.
17. Remove 4.7 M Ω resistor from TP 3412.

Phase Detector Gain Adjust (R3419)

1. Use stereo alignment disc—any signal, place player in "Play" mode.
2. Connect oscilloscope to TP 3408 (Fig. 26).
3. Short TP 3401 to TP 3403 with a clip lead. Short TP 3402 to TP 3403 with a clip lead.
4. Adjust R3419 for 3V p-p waveform at TP 3408 (Fig. 28).
5. Remove shorting clip leads from TP 3401 and TP 3402 to TP 3403.

Audio Demodulator VCO Adjust (716 kHz) (R4111)

1. Place player in "Load" mode.
2. Disconnect interconnect plug P4 (AO).
3. Short the two pins of J4 together.
4. Connect frequency counter via X10 probe (see note) to TP 4008 (Fig. 26).
5. Adjust R4111 for 716 kHz ± 2 kHz (Fig. 28).
6. Remove frequency counter and remove short from the two pins of J4. Reconnect P4.

Note: Typical capacity of X10 probe and counter is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25 pf.

Audio Demodulator VCO Adjust (905 kHz) (R4112)

1. Place player in "Load" mode.
2. Disconnect interconnect plug P4 (AO).
3. Short the two pins of J4 together.
4. Connect frequency counter via X10 probe (see note) to TP 4009 (Fig. 26).
5. Adjust R4112 for 905 kHz ± 2 kHz (Fig. 28).
6. Remove frequency counter and remove short from the two pins of J4. Reconnect P4.

Note: Typical capacity of X10 probe and counter is approximately 20-25 pf. A X1 probe (typical capacity of approximately 100 pf) may be used with a 33 pf capacitor placed in series with probe. This will place a load on the VCO of approximately 25 pf.

(L+R) Level Adjust (R4127)

1. Place player in "Play" mode.
2. Connect oscilloscope to J4602 (R OUT) Fig. 26.
3. Ground TP 5102.

4. Use stereo alignment disc Segment G (S1: 1020 Hz 50% S2: 1020 Hz 50% out of phase).
5. Adjust R4127 (Fig. 28) to produce 560 ± 20 mV p-p audio signal at J4602 (R OUT).
6. Remove ground from TP 5102.

(L-R) Level Adjust (R4128)

1. Place player in "Play" mode.
2. Connect oscilloscope to J4602 (R OUT) (Fig. 26).
3. Use stereo alignment disc Segment G. (S1: 1020 Hz 50% S2: 1020 Hz 50% out of phase).
4. Adjust R4128 (Fig. 28) to produce a minimum (null) V p-p at J4602 (R OUT).

TV Audio Level Adjust (R4303)

1. Place player in "Play" mode.
2. Use stereo alignment disc Segment C (S1: 1020 Hz 100%).
3. Connect oscilloscope to TP 3504 (Fig. 26).
4. Adjust R4303 (Fig. 28) to produce 1.2V p-p audio signal at TP 3504.

R. F. Output Channel Oscillator Adjust (L3501, L3502)

1. With player in "Load" mode, place Channel Switch, S3501, in Channel 3 position. Connect player to TV or 75 ohm load.
2. Connect marker generator (RF input) to TP 3501 and adjust for 61.25 MHz output, Fig. 26.
3. Adjust L3501 for zero beat (Fig. 28).
4. Place Channel Switch, S3501, in Channel 4 position.
5. Connect marker generator (RF input) to TP 3503 and adjust for 67.25 MHz output.
6. Adjust L3502 for zero beat (Fig. 28).

Note: Do not adjust RF Bandpass Coils L3506 and L3507.

4.5 MHz Oscillator Adjust (L3509)

1. Connect player to TV, player in "Load" mode.
2. Monitor a suitable point in TV IF to pick up 4.5 MHz sound carrier with a frequency counter.
3. Adjust L3509 (Fig. 28) for 4.5 MHz ± 1 kHz.

Video Modulation Depth Adjust (R3402)

1. Connect player to TV, player in "Play" mode.
2. Use stereo alignment disc 120 IRE white field signal (Segment H).
3. Adjust R3402 (Fig. 28) clockwise till a buzz is heard in TV audio, then turn counterclockwise to just eliminate the buzz.

Audio Modulation Depth Adjust (R4303)

1. Place player in "Play" mode.
2. Use stereo alignment disc, uniform motion on grey field, S1: 1020 Hz 100% (Segment C).
3. Connect oscilloscope to TP 3504 Fig. 26.
4. Adjust R4303 (Fig. 28) for 1.2 V p-p at TP 3504.

NOTE: The feature board adjustments are factory preset and should require no further adjustments. However, if adjustment is deemed necessary the following procedure is recommended.

Features Board Adjustment 1MHz, 6MHz and Sync Tip

1. Remove J6104 interconnect plug and cable from master circuit board.
2. Place instrument in "Pause" mode.
3. Verify -4.5VDC at pin 10 of U 6103, OSD μP .
4. Adjust L6101 (1MHz adjust) for $2.2\text{VDC} \pm 0.5\text{VDC}$ at TP 6106.
5. Adjust L6102 (6MHz adjust) for $8.0\text{VDC} \pm 0.2\text{VDC}$ at TP 6107.
6. Connect dual trace oscilloscope to J6104-1 and J6104-5.
7. Apply $+5.0\text{VDC} \pm .05\text{VDC}$ to J6104-1.
8. Adjust R6169 (Sync Tip Adjust) until sync tip levels at J6104-1 and J6104-5 are the same level ($\pm 0.05\text{VDC}$).
9. Remove oscilloscope and reconnect J6104 to Master Circuit Board. The word "PAUSE" will appear on screen.

I C VOLTAGE CHARTS

U5101 Player Control μC

Pin No.	Load	Play	Pause	Unload
1	GND	GND	GND	GND
2	+2.39V	+2.39V	+2.39V	+2.39V
3	+4.86V	+4.86V	+4.86V	+4.86V
4	+4.88V	+4.56V	0V	0V
5	N.C.	N.C.	N.C.	N.C.
6	N.C.	N.C.	N.C.	N.C.
7	+4.81V	+4.81V	+4.81V	+4.81V
8	+4.88V	+4.88V	+4.88V	+4.88V
9	+0.06V	+4.93V	+0.06V	+0.06V
10	+0.06V	+4.93V	+0.06V	+0.06V
11	+4.66V	+4.66V	+4.66V	+4.66V
12	+0.72V	+0.09V	+0.72V	+0.72V
13	See Note 1	See Note 1	See Note 1	See Note 1
14	See Note 1	See Note 1	See Note 1	See Note 1
15	See Note 1	See Note 1	See Note 1	See Note 1
16	See Note 1	See Note 1	See Note 1	See Note 1
17	See Note 1	See Note 1	See Note 1	See Note 1
18	See Note 1	See Note 1	See Note 1	See Note 1
19	See Note 1	See Note 1	See Note 1	See Note 1
20	See Note 4	See Note 4	See Note 4	See Note 4
21	Gnd	Gnd	Gnd	Gnd
22	See Note 4	See Note 4	See Note 4	See Note 4
23	See Note 4	See Note 4	See Note 4	See Note 4
24	See Note 4	See Note 4	See Note 4	See Note 4
25	+4.81V	+4.81V	+4.81V	+4.81V
26	See Note 2	See Note 2	See Note 2	See Note 2
27	See Note 2	See Note 2	See Note 2	See Note 2
28	0V	+4.89V	0V	0V
29	0V	+4.85V	+4.85V	+4.85V
30	See Note 4	See Note 4	See Note 4	See Note 4
31	+0.10V	+0.10V	+0.10V	+0.10V
32	+4.83V	+0.10V	+0.10V	+4.83V
33	0V	+4.84V	+4.84V	+4.84V
34	+0.70V	+0.70V	+0.70V	+0.70V
35	+3.55V	+3.55V	+3.55V	+3.55V
36	0V	+4.87V	+4.87V	+4.87V
37	+4.87V	See Note 3	+4.87V	+4.87V
38	+4.76V	See Note 3	+4.76V	+4.76V
39	+4.76V	See Note 3	+4.76V	+4.76V
40	+4.76V	See Note 3	+4.76V	+4.76V
41	+4.76V	See Note 3	+4.76V	+4.76V
42	+4.87V	+4.87V	+4.87V	+4.87V

N.C.—No Connection

Note 1. Voltage variable—depending upon which element of digital display is illuminated.

U 5102 Daxi Buffer μP

Pin No.	Load	Play	Pause	Unload
1	+2.69V	+2.69V	+2.69V	+2.69V
2	N.C.	N.C.	N.C.	N.C.
3	+2.59V	+2.59V	+2.59V	+2.59V
4	+4.81V	+0.35V	+4.81V	+4.81V
5	See Note 4	See Note 4	See Note 4	See Note 4
6	+2.39V	+2.39V	+2.39V	+2.39V
7	Gnd	Gnd	Gnd	Gnd
8	0V	+0.10V	0V	0V
9	N.C.	N.C.	N.C.	N.C.
10	See Note 4	See Note 4	See Note 4	See Note 4
11	See Note 4	See Note 4	See Note 4	See Note 4
12	N.C.	N.C.	N.C.	N.C.
13	0V	+0.10V	0V	0V
14	+4.95V	+4.95V	+4.95V	+4.95V

U5901 Mechanism Control μC

Pin No.	Load	Play	Pause	Unload
1	+2.15V	+2.15V	+2.15V	+2.15V
2	+2.58V	+2.58V	+2.58V	+2.58V
3	+4.87V	+4.87V	+4.87V	+4.87V
4	+4.90V	See Note 4	See Note 4	See Note 4
5	+4.90V	See Note 5	See Note 5	See Note 5
6	+0.70V	+0.70V	+0.70V	+0.70V
7	+0.70V	+0.70V	+0.70V	+0.70V
8	+4.84V	+4.68V	+4.68V	+4.84V
9	+4.84V	+4.68V	+4.68V	+4.84V
10	+4.84V	+4.68V	+4.68V	+4.84V
11	+4.84V	+4.68V	+4.68V	+4.84V
12	0V	+4.84V	+4.84V	+4.84V
13	N.C.	N.C.	N.C.	N.C.
14	Gnd	Gnd	Gnd	Gnd
15	N.C.	N.C.	N.C.	N.C.
16	N.C.	N.C.	N.C.	N.C.
17	+4.84V	+0.10V	+0.10V	+4.84V
18	+0.10V	+0.10V	+0.10V	+0.10V

N.C.—No Connection

Note 2. Voltage variable stepper motor control pulses

Note 3. Voltage controlled by front panel function switches (5600 series). Normally high—momentary low when corresponding function switch is depressed.

U5901 Mechanism Control μ C (continued)

Pin No.	Load	Play	Pause	Unload
19	+4.84V	+4.84V	+4.84V	+4.84V
20	+4.84V	+4.84V	+4.84V	+4.84V
21	+0.10V	+2.50V	+2.50V	+0.10V
22	+0.10V	+2.50V	+2.50V	+0.10V
23	0V	+4.85V	+4.85V	+4.85V
24	+4.78V	+4.87V	+4.78V	+4.78V
25	+4.78V	0V	0V	0V
26	+4.89V	+4.89V	+4.89V	+4.89V
27	See Note 5	See Note 5	See Note 5	See Note 5
28	+4.89V	+4.89V	+4.89V	+4.89V

U5902 T.T. Motor Control I.C.

Pin No.	Load	Play	Pause	Unload
1	+0.26V	+0.34V	+0.34V	+0.26V
2	+0.58V	+0.58V	+0.58V	+0.58V
3	+0.58V	+0.58V	+0.58V	+0.58V
4	+4.89V	+4.89V	+4.89V	+4.89V
5	+0.58V	+0.58V	+0.58V	+0.58V
6	+0.58V	+0.58V	+0.58V	+0.58V
7	+0.24V	+0.32V	+0.32V	+0.24V
8	+0.24V	+0.32V	+0.32V	+0.24V
9	+0.58V	+0.58V	+0.58V	+0.58V
10	+0.58V	+0.58V	+0.58V	+0.58V
11	Gnd	Gnd	Gnd	Gnd
12	+0.58V	+0.58V	+0.58V	+0.58V
13	+0.58V	+0.58V	+0.58V	+0.58V
14	+0.26V	+0.34V	+0.34V	+0.26V

U2001 Power Supply IC

Pin No.	Load	Play	Pause	Unload
1	+5.15V	—	—	—
2	+0.89V	—	—	—
3	+0.89V	—	—	—
4	+22.4V	—	—	—
5	+4.90V	—	—	—
6	+4.90V	—	—	—
7	+12.8V	—	—	—
8	+3.18V	—	—	—
9	+4.90V	—	—	—
10	+4.90V	—	—	—
11	Gnd	—	—	—
12	+4.90V	—	—	—
13	+4.90V	—	—	—
14	+11.5V	—	—	—

U2501 Pulse Interference Corrector (PIC) IC

Pin No.	Load	Play	Pause	Unload
1	+5.40V	+6.87V	+6.87V	+5.40V
2	+3.64V	+3.64V	+3.64V	+3.64V
3	N.C.	N.C.	N.C.	N.C.

U2501 Pulse Interference Corrector (PIC) IC (continued)

Pin No.	Load	Play	Pause	Unload
4	+1.47V	+1.47V	+1.47V	+1.47V
5	+1.47V	+1.47V	+1.47V	+1.47V
6	+1.47V	+1.47V	+1.47V	+1.47V
7	Gnd	Gnd	Gnd	Gnd
8	Gnd	Gnd	Gnd	Gnd
9	N.C.	N.C.	N.C.	N.C.
10	N.C.	N.C.	N.C.	N.C.
11	N.C.	N.C.	N.C.	N.C.
12	+3.64V	+3.64V	+3.64V	+3.64V
13	+11.6V	+11.6V	+11.6V	+11.6V
14	+6.15V	+7.57V	+7.57V	+6.15V

U3101 Sync Detector IC (NLAC)

Pin No.	Load	Play	Pause	Unload
1	+4.69V	+4.77V	+4.69V	+4.69V
2	+3.53V	+3.47V	+3.47V	+3.47V
3	Gnd	Gnd	Gnd	Gnd
4	+1.42V	+1.42V	+1.42V	+1.42V
5	+1.42V	+1.42V	+1.42V	+1.42V
6	+1.42V	+1.42V	+1.42V	+1.42V
7	Gnd	Gnd	Gnd	Gnd
8	Gnd	Gnd	Gnd	Gnd
9	N.C.	N.C.	N.C.	N.C.
10	N.C.	N.C.	N.C.	N.C.
11	N.C.	N.C.	N.C.	N.C.
12	+3.53V	+3.47V	+3.47V	+3.47V
13	+10.3V	+10.3V	+10.3V	+10.3V
14	+5.36V	+5.36V	+5.36V	+5.36V

U3201 Video FM Demod IC

Pin No.	Load	Play	Pause	Unload
1	+3.10V	+3.10V	+3.10V	+3.10V
2	+3.10V	+3.10V	+3.10V	+3.10V
3	+3.10V	+3.10V	+3.10V	+3.10V
4	Gnd	Gnd	Gnd	Gnd
5	+6.90V	+6.98V	+6.98V	+6.90V
6	+6.90V	+6.84V	+6.84V	+6.90V
7	+6.24V	+6.32V	+6.32V	+6.24V
8	+0.45V	+4.19V	+1.16V	+0.45V
9	+5.60V	+5.87V	+5.60V	+5.60V
10	+2.10V	0V	0V	+2.10V
11	+5.90V	+6.20V	+5.90V	+5.90V
12	0V	+4.17V	+1.15V	0V
13	+5.75V	+5.82V	+5.82V	+5.75V
14	+11.5V	+11.5V	+11.5V	+11.5V
15	+5.24V	+5.30V	+5.30V	+5.24V
16	+5.24V	+5.30V	+5.30V	+5.24V

Note 5. Voltage dependent on side of disc being played.
Side 1 play—voltage high; side 2 play—voltage low

U3301 ComB Filter/Defect Corrector IC

Pin No.	Load	Play	Pause	Unload
1	+5.05V	+5.05V	+5.05V	+5.05V
2	+5.74V	+5.83V	+5.83V	+5.74V
3	-4.52V	-4.52V	-4.52V	-4.52V
4	+3.89V	+3.89V	+3.89V	+3.89V
5	-4.52V	-4.52V	-4.52V	-4.52V
6	-4.52V	-4.52V	-4.52V	-4.52V
7	-4.52V	-4.52V	-4.52V	-4.52V
8	Gnd	Gnd	Gnd	Gnd
9	+8.86V	+8.86V	+8.86V	+8.86V
10	+3.86V	+3.86V	+3.86V	+3.86V
11	+3.73V	+3.73V	+3.73V	+3.73V
12	+2.57V	+2.57V	+2.57V	+2.57V
13	+2.42V	+2.42V	+2.42V	+2.42V
14	+5.32V	+5.32V	+5.32V	+5.32V
15	+5.18V	+5.18V	+5.18V	+5.18V
16	+14.6V	+14.6V	+14.6V	+14.6V
17	N.C.	N.C.	N.C.	N.C.
18	+5.10V	+5.10V	+5.10V	+5.10V
19	+4.76V	+4.76V	+4.76V	+4.76V
20	+8.50V	+8.50V	+8.50V	+8.50V
21	+7.24V	+7.24V	+7.24V	+7.24V
22	+5.25V	+5.25V	+5.25V	+5.25V

U3401 Armstretcher IC

Pin No.	Load	Play	Pause	Unload
1	+7.97V	+7.97V	+7.24V	+7.97V
2	+7.23V	+7.23V	+7.23V	+7.23V
3	+5.74V	+5.74V	+5.74V	+5.74V
4	+14.6V	+14.6V	+14.6V	+14.6V
5	+7.17V	+7.17V	+7.17V	+7.17V
6	+7.15V	+7.15V	+7.15V	+7.15V
7	+7.65V	+7.65V	+7.65V	+7.65V
8	+6.69V	+6.69V	+6.69V	+6.69V
9	+7.19V	+7.19V	+7.16V	+7.19V
10	+7.16V	+7.16V	+7.16V	+7.16V
11	Gnd	Gnd	Gnd	Gnd
12	+4.89V	+4.89V	+4.89V	+4.89V
13	+4.89V	+4.89V	+4.89V	+4.89V
14	+5.63V	+5.66V	+5.66V	+5.63V

U3402 Video Converter IC

Pin No.	Load	Play	Pause	Unload
1	0V	+4.17V	+1.15V	0V
2	+5.19V	+4.26V	+5.19V	+5.19V
3	+7.17V	+7.17V	+7.17V	+7.17V
4	+3.61V	+3.16V	+3.16V	+3.16V
5	+7.16V	+7.16V	+7.16V	+7.16V
6	+4.44V	+4.44V	+4.44V	+4.44V
7	+2.22V	+2.22V	+2.22V	+2.22V
8	Gnd	Gnd	Gnd	Gnd
9	+3.61V	+3.61V	+3.61V	+3.61V
10	+8.05V	+8.05V	+8.05V	+8.05V
11	+10.5V	+10.5V	+10.5V	+10.5V
12	+7.16V	+7.16V	+7.16V	+7.16V
13	+7.16V	+7.16V	+7.16V	+7.16V
14	+9.42V	+9.42V	+9.42V	+9.42V
15	+9.42V	+9.42V	+9.42V	+9.42V

U3402 Video Converter IC (continued)

Pin No.	Load	Play	Pause	Unload
16	+3.24V	+3.24V	+3.24V	+3.24V
17	+3.24V	+3.24V	+3.24V	+3.24V
18	+7.83V	+7.72V	+7.03V	+7.83V
19	+11.7V	+11.7V	+11.7V	+11.7V
20	+1.86V	+1.86V	+1.86V	+1.86V
21	+6.76V	+5.26V	+6.76V	+6.76V
22	+0.66V	+6.80V	+0.66V	+0.66V
23	+1.07V	+0.26V	+1.07V	+1.07V
24	+7.18V	+7.18V	+7.18V	+7.18V

U3501 RF Modulator IC

Pin No.	Load	Play	Pause	Unload
1	+7.18V	+7.18V	+7.18V	+7.18V
2	+7.18V	+7.18V	+7.18V	+7.18V
3	+7.18V	+7.18V	+7.18V	+7.18V
4	+7.18V	+7.18V	+7.18V	+7.18V
5	Gnd	Gnd	Gnd	Gnd
6	See Note 6	See Note 6	See Note 6	See Note 6
7	See Note 6	See Note 6	See Note 6	See Note 6
8	See Note 7	See Note 7	See Note 7	See Note 7
9	See Note 7	See Note 7	See Note 7	See Note 7
10	+14.5V	+14.5V	+14.5V	+14.5V
11	+14.7V	+14.7V	+14.7V	+14.7V
12	+9.99V	+9.99V	+9.99V	+9.99V
13	+7.21V	+7.21V	+7.21V	+7.21V
14	+14.7V	+14.7V	+14.7V	+14.7V
15	+14.7V	+14.7V	+14.7V	+14.7V
16	+14.7V	+14.7V	+14.7V	+14.7V
17	+14.2V	+14.2V	+14.2V	+14.2V
18	+7.18V	+7.18V	+7.18V	+7.18V

U4101 (L+R) Audio FM Demod IC (716kHz)

Pin No.	Load	Play	Pause	Unload
1	+3.15V	+3.15V	+3.15V	+3.15V
2	+3.15V	+3.15V	+3.15V	+3.15V
3	+3.15V	+3.15V	+3.15V	+3.15V
4	Gnd	Gnd	Gnd	Gnd
5	+6.94V	+6.94V	+6.94V	+6.94V
6	+7.06V	+7.06V	+7.06V	+7.06V
7	+6.30V	+6.30V	+6.30V	+6.30V
8	+4.21V	+4.21V	+4.21V	+4.21V
9	+5.88V	+5.88V	+5.88V	+5.88V
10	Gnd	Gnd	Gnd	Gnd
11	+5.91V	+5.91V	+5.91V	+5.91V
12	+0.85V	+0.85V	+0.85V	+0.85V
13	+2.06V	+5.84V	+5.84V	+2.06V
14	+11.6V	+11.6V	+11.6V	+11.6V
15	+5.30V	+5.30V	+5.30V	+5.30V
16	+5.30V	+5.30V	+5.30V	+5.30V

Note 6. +13.1V channel 3 operation; +1.47V channel 4 operation

Note 7. +1.47V channel 3 operation; +13.1V channel 4 operation

U4102 (L-R) Audio FM Demod IC (905kHz)

Pin No.	Load	Play	Pause	Unload
1	+3.13V	+3.13V	+3.13V	+3.13V
2	+3.13V	+3.13V	+3.13V	+3.13V
3	+3.13V	+3.13V	+3.13V	+3.13V
4	Gnd	Gnd	Gnd	Gnd
5	+6.94V	+6.94V	+6.94V	+6.94V
6	+6.98V	+6.98V	+6.98V	+6.98V
7	+6.28V	+6.28V	+6.28	+6.28V
8	+4.20V	+4.20V	+4.20V	+4.20V
9	+5.86V	+5.86V	+5.86V	+5.86V
10	Gnd	Gnd	Gnd	Gnd
11	+5.88V	+5.88V	+5.88V	+5.88V
12	+0.85V	+0.85V	+0.85V	+0.75V
13	+2.46V	+5.81V	+5.81V	+2.46V
14	+11.6V	+11.6V	+11.6V	+11.6V
15	+5.27V	+5.27V	+5.27V	+5.27V
16	+5.27V	+5.27V	+5.27V	+5.27V

U4200 Track/Hold and Mute (C Mos Switch) IC

Pin No.	Load	Play	Pause	Unload
1	+2.36V	+2.36V	+2.36V	+2.36V
2	+0.95V	+3.88V	+1.43V	+0.95V
3	+6.94V	+6.94V	+6.94V	+6.94V
4	+6.95V	+6.95V	+6.95V	+6.95V
5	+0.59V	+5.61V (1)	+0.59V	+0.59V
6	+0.45V	+5.29V (2)	+0.45V	+0.45V
7	Gnd	Gnd	Gnd	Gnd
8	+7.89V	+7.89V	+7.89V	+7.89V
9	+7.89V	+7.89V	+7.89V	+7.89V
10	+6.92V	+6.92V	+6.92V	+6.92V
11	+6.92V	+6.92V	+6.92V	+6.92V
12	+0.45V	+5.25V (3)	+0.45V	+0.45V
13	0V	0V (4)	0V	0V
14	+9.17V	+8.56V	+9.17V	+9.17V

U4300 Audio Matrix Buffer IC

Pin No.	Load	Play	Pause	Unload
1	+7.91V	+7.91V	+7.91V	+7.91V
2	+7.91V	+7.91V	+7.91V	+7.91V
3	+6.93V	+6.93V	+6.93V	+6.93V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+7.89V	+7.89V	+7.89V	+7.89V
6	+7.89V	+7.89V	+7.89V	+7.89V
7	+7.87V	+7.87V	+7.87V	+7.87V
8	+9.55V	+9.55V	+9.55V	+9.55V
9	+7.89V	+7.89V	+7.89V	+7.89V
10	+7.89V	+7.89V	+7.89V	+7.89V
11	Gnd	Gnd	Gnd	Gnd
12	+6.94V	+6.94V	+6.94V	+6.94V
13	+7.92V	+7.92V	+7.92V	+7.92V
14	+7.92V	+7.92V	+7.92V	+7.92V

U4400 Decoder Rectifier IC

Pin No.	Load	Play	Pause	Unload
1	+0.98V	+2.32V	+0.98V	+0.98V
2	+1.30V	+1.37V	+1.30V	+1.30V
3	+1.31V	+1.36V	+1.30V	+1.30V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+1.31V	+1.37V	+1.31V	+1.31V
6	+1.31V	+1.36V	+1.31V	+1.31V
7	+0.98V	+2.28V	+0.98V	+0.98V
8	+1.00V	+0.95V	+1.00V	+1.00V
9	+1.31V	+1.37V	+1.31V	+1.31V
10	+1.31V	+1.36V	+1.31V	+1.31V
11	Gnd	Gnd	Gnd	Gnd
12	+1.31V	+1.36V	+1.31V	+1.31V
13	+1.31V	+1.36V	+1.31V	+1.31V
14	+1.00V	+0.97V	+1.00V	+1.00V

U4500 Decoder Control IC

Pin No.	Load	Play	Pause	Unload
1	+1.93V	See Note 8	+1.74V	+1.93V
2	+1.43V	See Note 8	+1.43V	+1.43V
3	+1.43V	See Note 8	+1.43V	+1.43V
4	+14.7V	+14.7V	+14.7V	+14.7V
5	+1.43V	See Note 8	+1.43V	+1.43V
6	+1.43V	See Note 8	+1.43V	+1.43V
7	+1.99V	See Note 8	+1.99V	+1.99V
8	0V	See Note 8	+2.36V	0V
9	+1.30V	See Note 8	+1.91V	+1.30V
10	+0.62V	See Note 8	+1.89V	+0.62V
11	Gnd	Gnd	Gnd	Gnd
12	+0.95V	+2.32V	+1.43V	+0.95V
13	+1.16V	+2.30V	+1.43V	+1.16V
14	+0.62V	+6.19V	+1.90V	+0.62V

U4600 Audio Output IC

Pin No.	Load	Play	Pause	Unload
1	+0.09V	+1.22V	+1.10V	+0.09V
2	+8.68V	+8.68V	+8.68V	+8.68V
3	+8.07V	+8.07V	+8.07V	+8.07V
4	+8.07V	+8.07V	+8.07V	+8.07V
5	+7.85V	+7.69V	+7.85V	+7.85V
6	Gnd	Gnd	Gnd	Gnd
7	+7.83V	+7.67V	+7.83V	+7.83V
8	+6.64V	+6.49V	+6.64V	+6.64V
9	+6.64V	+6.67V	+6.64V	+6.64V
10	+7.83V	+7.83V	+7.83V	+7.83V
11	+14.6V	+14.6V	+14.6V	+14.6V
12	+7.85V	+7.88V	+7.85V	+7.85V
13	+8.07V	+8.07V	+8.07V	+8.07V
14	+8.07V	+8.07V	+8.07V	+8.07V
15	+8.68V	+8.68V	+8.68V	+8.68V
16	+0.09V	+1.22V	+1.10V	+0.09V

Note 8. Voltage varies when playing stereo VideoDisc due to processing action of time constant network.

Q401	E	+3.07V
	B	+3.80V
	C	+7.84V

Q402	E	+7.08V
	B	+7.84V
	C	+14.4V

Q403	E	+1.08V
	B	+2.38V
	C	+7.42V

Q404	E	+1.81V
	B	+2.41V
	C	+14.7V

Q405	A	+7.43V
	G	+12.1V
	K	Gnd

Q2001	E	+22.6V
	B	+21.9V
	C	+14.7V

Q2002	E	+23.0V
	B	+22.7V
	C	+21.9V

Q2003	E	+2.72V
	B	+3.34V
	C	+21.9V

Q2004	E	+12.1V
	B	+12.7V
	C	+14.1V

Q2005	E	+5.04V
	B	+5.65V
	C	+11.2V

Q2006	E	+4.90V
	B	+5.04V
	C	+5.65V

Q2007	E	+11.9V
	B	+12.1V
	C	+12.7V

Q2501	E	+6.63V
	B	+7.28V
	C	+12.9V

Q2502	E	+0.34V
	B	+0.90V
	C	+14.6V

Q2503	E	Gnd
	B	+0V
	C	+5.84V

Q2504	G	+3.42V
	S	+6.42V
	D	+6.64V

Q2505	E	+11.6V
	B	+11.1V
	C	+8.73V

Q2506	E	+5.94V
	B	+5.52V
	C	+0.18V

Q2507	E	Gnd
	B	+0.18V
	C	+0V

NOT USED SJT 100

Q2701	E	+6.46V
	B	+7.13V
	C	+14.7V

Q3101	E	+8.83V
	B	+9.47V
	C	+14.5V

Q3102	E	+9.49V
	B	+8.83V
	C	+4.81V

Q3103	E	+4.16V
	B	+4.82V
	C	+10.3V

Q3104	E	+9.60V
	B	+10.3V
	C	+14.5V

Q3105	E	+0.9V
	B	+1.52V
	C	+7.72V

Q3107	E	+4.72V
	B	+5.28V
	C	+7.80V

Q3201	E	+5.62V
	B	+6.29V
	C	+8.52V

Q3202	E	+5.51V
	B	+6.17V
	C	+11.5V

Q3301	E	+4.40V
	B	+5.03V
	C	+14.6V

Q3303	E	+4.50V
	B	+5.16V
	C	+14.6V

Q3304	E	+3.88V
	B	+4.49V
	C	+14.6V

Q3305	E	+5.65V
	B	+5.06V
	C	Gnd

Q3306	E	+4.46V
	B	+5.11V
	C	+11.9V

Q3401	E	+8.31V
	B	+8.98V
	C	+14.6V

Q3402	E	+3.62V
	B	+4.26V
	C	+8.97V

Q3403	E	+5.61V
	B	+6.26V
	C	+9.08V

Q3404	E	+8.39V
	B	+9.04V
	C	+13.9V

Q3405	E	+7.20V
	B	Varies
	C	+14.7V

Q3406	E	+7.20V
	B	Varies
	C	Gnd

Q3407	E	+7.15V
	B	Varies
	C	+14.7V

Q3408	E	+7.14V
	B	Varies
	C	Gnd

Q3409	E	Gnd
	B	+0.11V
	C	+4.09V

Q3412	E	+3.90V
	B	+4.60V
	C	+5.85V

Q3413	E	+5.20V
	B	+5.85V
	C	+11.5V

Q3501	E	+14.7V
	B	+13.9V
	C	+14.6V

Q4102	E	Gnd
	B	+0.65V
	C	+0.02V

Q4301	E	+7.15V
	B	+7.79V
	C	+14.6V

Q4302	E	+7.15V
	B	+7.79V
	C	+14.6V

Q4501	E	+1.93V
	B	+1.33V
	C	+1.26V

Q5101	E	+3.01V
	B	+4.70V
	C	+2.07V

Q5102	E	+3.01V
	B	+2.55V
	C	+2.70V

Q5103	E	Gnd
	B	+0.68V
	C	+0.02V

[illegible]

NOTE Voltages measured with DVM—Player in “PLAY” mode unless otherwise indicated.

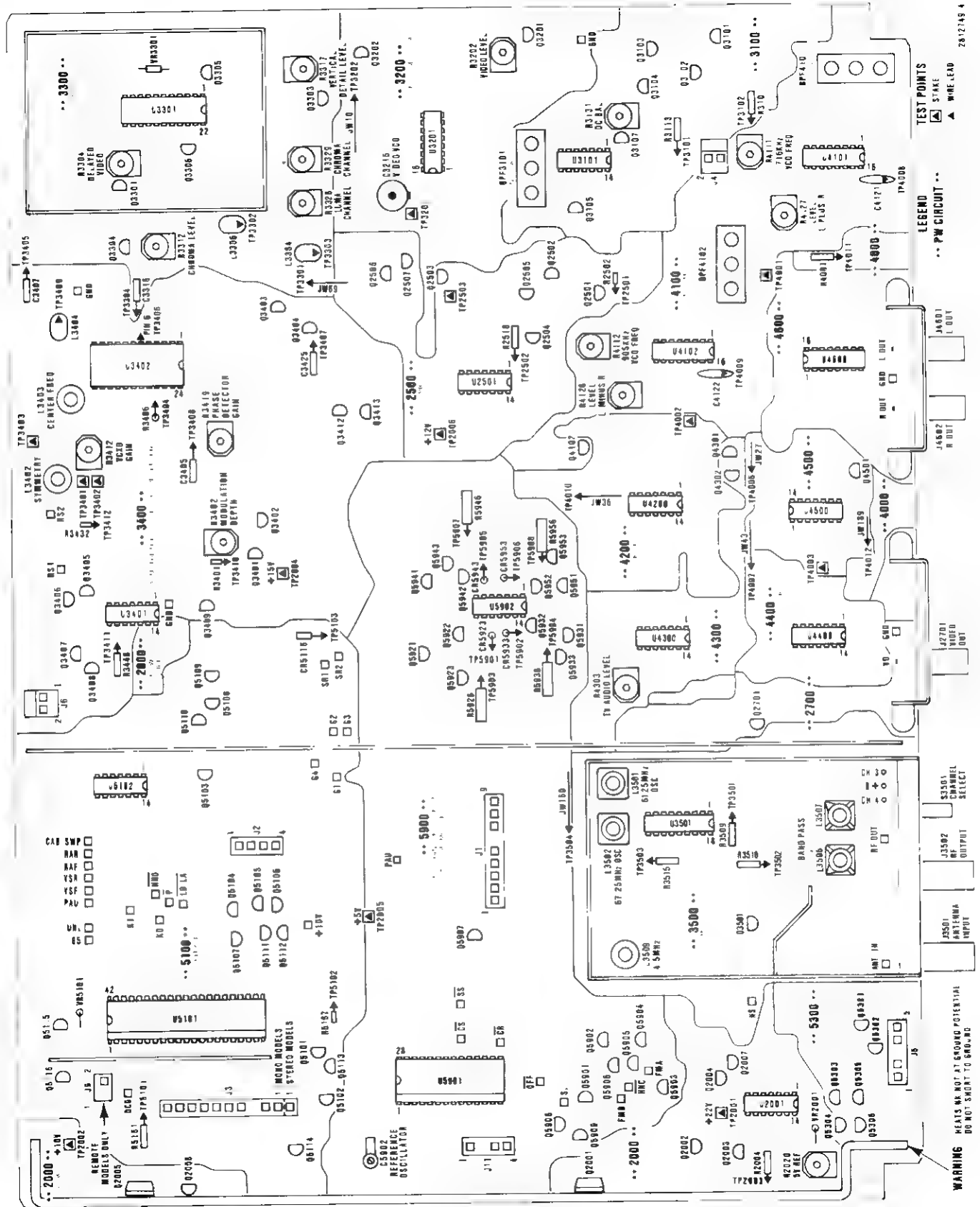


Fig. 26—Test Point and Active Device Location

TEST POINTS

TP2001 + 22VDC
 TP2002 + 10VDC
 TP2003 + 5.0V Ref
 TP2004 + 15VDC (In 3400 Area)
 TP2005 + 5VDC
 TP2006 + 12VDC (In 2500 Area)
 TP2501 FM In
 TP2502 Detector Out
 TP2503 Defect Input
 TP3101 Anlac Setup
 TP3102 Arm Input
 TP3201 5.3MHz VCO
 TP3202 Video Input to U3301
 TP3301 Vertical Detail Out
 TP3302 Luminance Out
 TP3303 Vertical Detail
 TP3304 1.53MHz Chroma
 TP3401 VCXO Setup
 TP3402 VCXO Input
 TP3403 + 7VDC Ref
 TP3404 Luminance Input
 TP3405 1.53MHz Clock
 TP3406 3.58MHz Oscillator
 TP3407 1.53MHz Clock Buffered
 TP3408 Phase Detector Output
 TP3409 5.11MHz Oscillator
 TP3410 Video Input to Modulator
 TP3411 Armstretcher Setup
 TP3501 Channel 3 Output
 TP3502 Channel 4 Output
 TP3503 4.5MHz Input
 TP3504 Audio input
 TP4001 Left Plus Right Output
 TP4002 Left Minus Right Output
 TP4003 Rectified Output
 TP4006 Left Matrix Output
 TP4007 Right Matrix Output
 TP4008 716KHz VCO
 TP4009 905KHz VCO
 TP4010 Decoder Disable
 TP4011 + 7.5VDC Ref
 TP4012 + 1.4VDC Ref
 TP5101 Audio Channel A Mute
 TP5102 Audio Channel B Mute
 TP5103 Squelch
 TP5901 Turntable Motor Drive
 Voltage B
 TP5902 Turntable Motor Drive
 Voltage A
 TP5903 Turntable Motor Drive
 Current B
 TP5904 Turntable Motor Drive
 Current A
 TP5905 Turntable Motor Drive
 Voltage D
 TP5906 Turntable Motor Drive
 Voltage C
 TP5907 Turntable Motor Drive
 Current D
 TP5908 Turntable Motor Drive
 Current C

ACTIVE DEVICES

Q2001 Regulator
 Q2002 Current Limiter
 Q2003 Driver
 Q2004 Regulator
 Q2005 Regulator
 Q2006 Current Limiter
 Q2007 Current Limiter
 Q2501 RF Amplifier
 Q2502 Output Detector/Switch
 Q2503 Output Detector/Switch
 Q2504 Gain Control
 Q2505 AGC Amplifier
 Q2506 Sync Stripper
 Q2507 Clamp
 Q2701 Video Driver
 Q3101 N-Lac Buffer
 Q3102 N-Lac Amplifier
 Q3103 N-Lac Amplifier
 Q3104 N-Lac Output Driver
 Q3105 716KHz Amplifier
 Q3107 Control Amplifier
 Q3201 Phase Corrector
 Q3202 Video Buffer
 Q3301 Delayed Video Drive
 Q3303 Vertical Detail Buffer
 Q3304 Chroma Driver
 Q3305 Chroma Buffer
 Q3306 Luma Buffer
 Q3401 Video Buffer
 Q3402 Video Amplifier
 Q3403 Clock Phase Shifter
 Q3404 Clock Buffer
 Q3405 Transducer Driver
 Q3406 Transducer Driver
 Q3407 Transducer Driver
 Q3408 Transducer Driver
 Q3409 Video Blanking
 Q3412 Noise Coring Amplifier
 Q3413 Noise Coring Buffer
 Q3501 Bias Switch
 Q4102 Decoder Defeat
 Q4301 Left Channel Buffer
 Q4302 Right Channel Buffer
 Q4501 Current Source
 Q5101 Least Significant Digit Driver
 Q5102 Most Significant Digit Driver
 Q5103 Daxi Status Inverter
 Q5104 Stepper Output B
 Q5105 Stepper Drive A
 Q5106 Stepper Output A
 Q5107 Stepper Output D
 Q5108 Lifter Drive
 Q5109 Lifter Output
 Q5110 Vertical Detail Driver
 Q5111 Stepper Drive C
 Q5112 Stepper Output C
 Q5113 LED Display Select
 Q5114 Discrete LED Select
 Q5115 Low Voltage Detector
 Q5116 Reset Switch
 Q5301 Reverse Ramp Switch

ACTIVE DEVICES (Continued)

Q5302 Forward Ramp Switch
 Q5303 Kick Pulse Driver
 Q5304 Kick Pulse Driver
 Q5305 Kick Pulse Output
 Q5306 Kick Pulse Output
 Q5901 Reverse Function Switch
 Q5902 Function Drive Reverse
 Q5903 Forward Function Switch
 Q5904 Function Drive Forward
 Q5905 Function Motor Output
 Forward
 Q5906 Function Motor Output
 Reverse
 Q5907 Pause Line Buffer
 Q5908 Rev. Driver Switch
 Q5909 Fwd. Driver Switch
 Q5921 Current Source Switch
 Q5922 Drive Amplifier
 Q5923 Turntable Motor Driver B
 Q5931 Current Source Switch
 Q5932 Drive Amplifier
 Q5933 Turntable Motor Driver A
 Q5941 Current Source Switch
 Q5942 Drive Amplifier
 Q5943 Turntable Motor Driver D
 Q5951 Current Source Switch
 Q5952 Drive Amplifier
 Q5953 Turntable Motor Driver C
 U2001 Quad Operational Amplifier
 U2501 Sync Detector
 U3101 Sync Detector
 U3201 Video FM Demodulator
 U3301 Comb Filter/Defect Corrector
 U3401 Armstretcher Drive
 U3402 Video Converter
 U3501 RF Modulator
 U4101 Audio Demodulator
 U4102 Audio Demodulator
 U4200 Track/Hold Mute
 U4300 Audio Matrix & Buffer
 U4400 Decoder Rectifier
 U4500 Decoder Control
 U4600 Decoder Amplifier
 U5101 Player Control
 Microcomputer
 U5102 Daxi Buffer
 U5901 Mechanism Microcomputer
 U5902 Turntable Drive
 VR2001 5.8V Zener
 VR3301 9.1V Zener
 VR5101 2.85V Zener

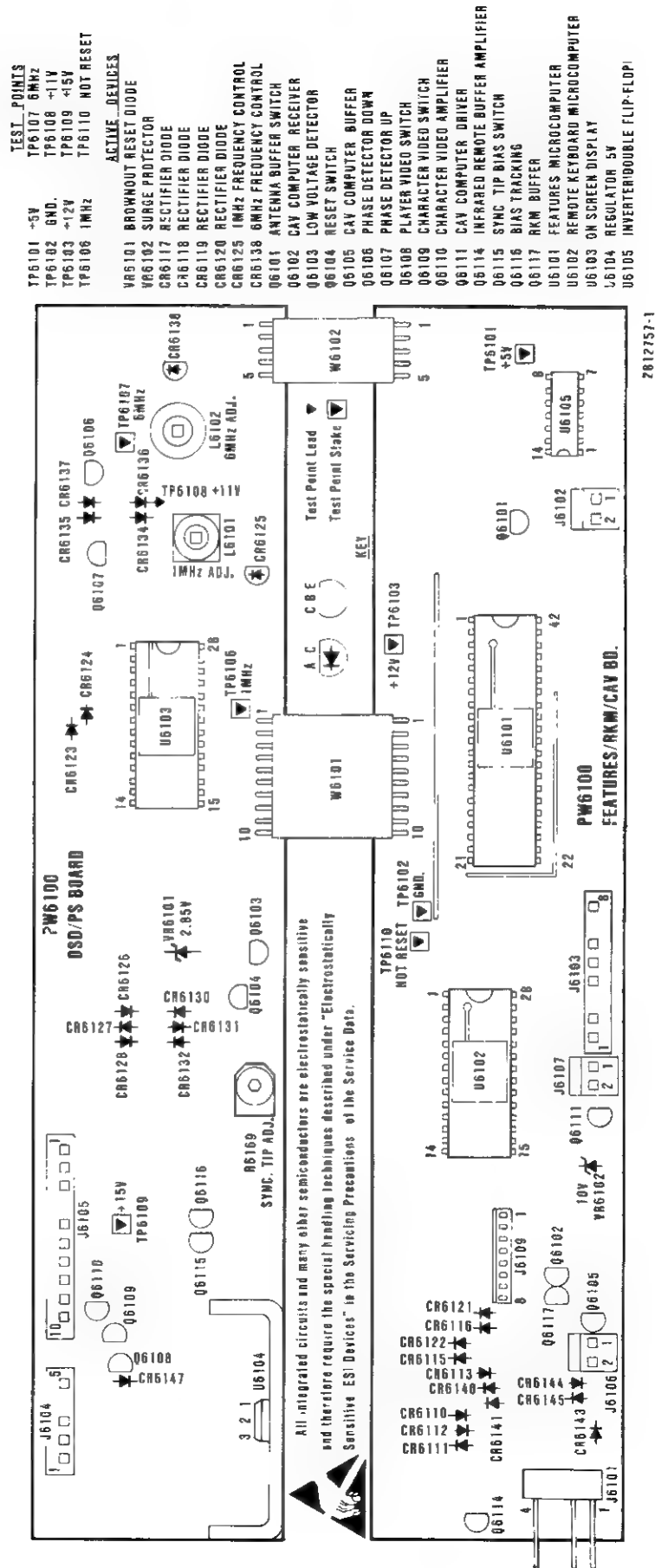
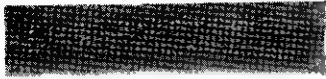
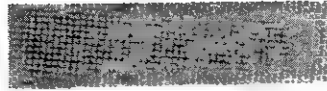
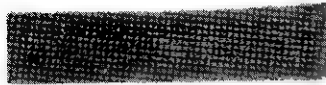


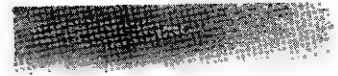
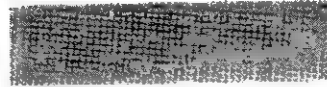
Fig. 27—PW6100 Test Point and Active Device Location



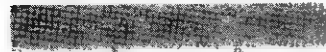
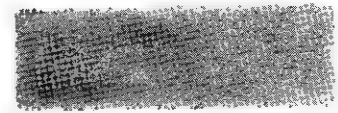
① 5mS Div. 4V p-p



② 5mS Div. .8V p-p



③ 5mS Div 5V p-p



④ 5mS Div 3V p-p



⑤ 5mS Div 3V p-p



⑥ 5mS Div 3V p-p



⑦ 5mS Div 3V p-p



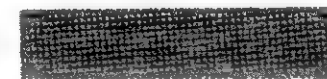
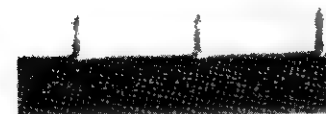
⑧ 5mS Div .3V p-p



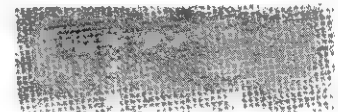
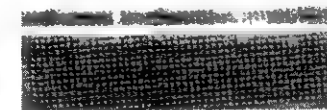
⑨ 5mS Div 3V p-p



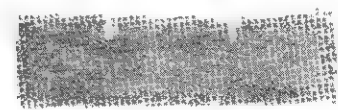
⑩ 5mS Div. .6V p-p



⑪ 5mS Div. .4V p-p



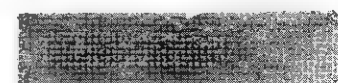
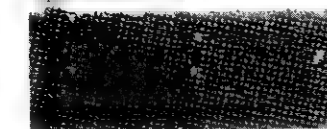
⑫ 5mS Div. 25V p-p



⑬ 5mS Div. .4V p p



⑭ 5mS Div. 15V p p



⑮ 5mS Div. 5V p p

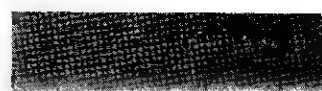




16 5mS Div 35V p-p



17 5mS Div 8V p-p



18 5mS Div 2V p-p

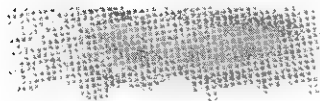


19 5mS Div 2V p-p

20 5mS Div 2V p-p

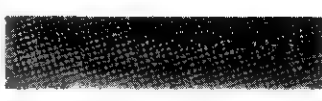


21 5mS Div 5.5V p-p



22 5mS Div 5V p-p

23 2mS Div 75mV p-p

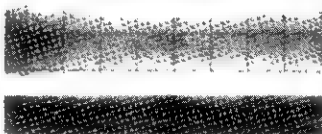


24 5mS Div 3V p-p

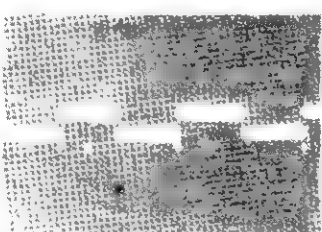
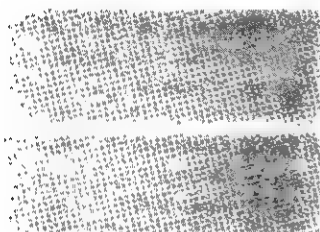


25 5mS Div 4.2V p-p

26 10mS Div 5V p-p

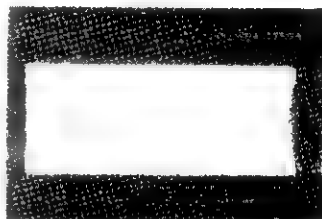


27 10mS Div 5V p-p



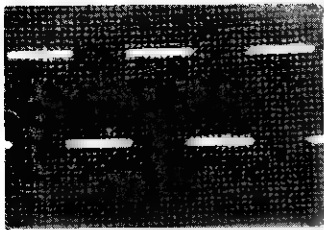
28 10mS Div 5V p-p

29 10mS Div 5V p-p

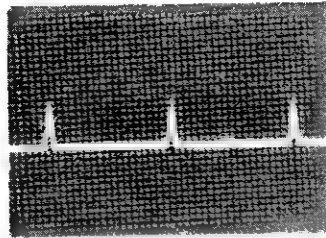


30 10mS Div 4V p-p

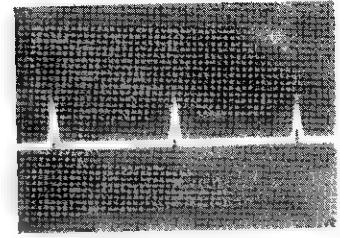




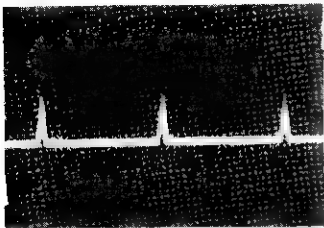
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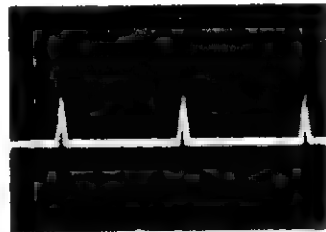
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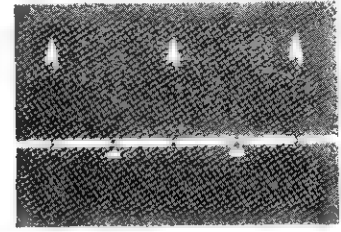
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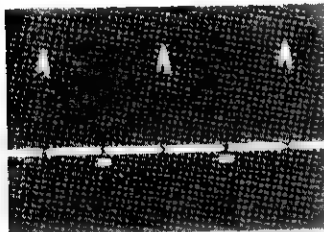
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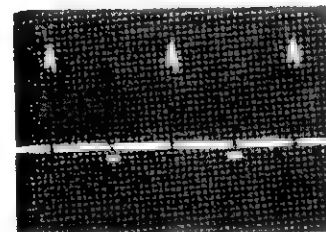
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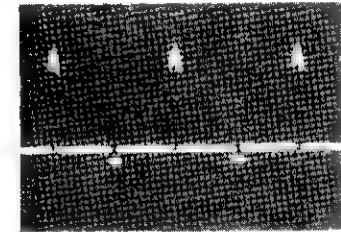
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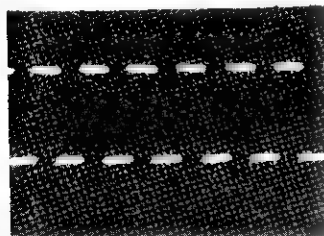
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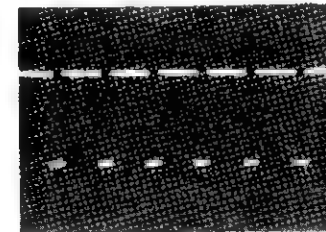
③⑧ 10mS/Div. 1.5V p-p



③⑨ 10mS/Div. 1.5V p-p



④① 5mS Div 5V p-p



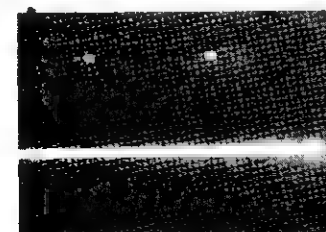
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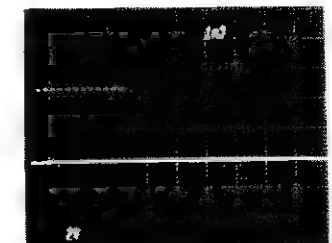
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④③ 1mS Div 5V p-p



④④ 5mS/Div. 5V p-p



④⑤ U6101 Pin 5



(46) U6101 Pin 6



(47) U6101 Pin 7



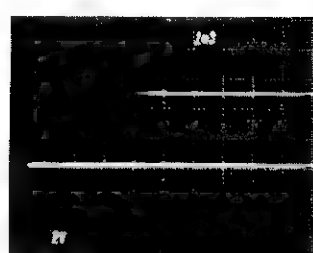
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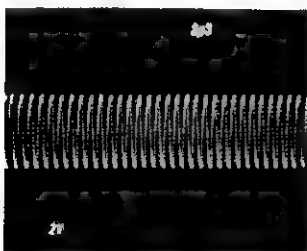
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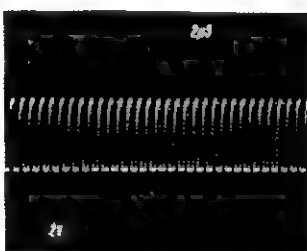
(50) U6101 Pin 10



(51) U6101 Pin 11



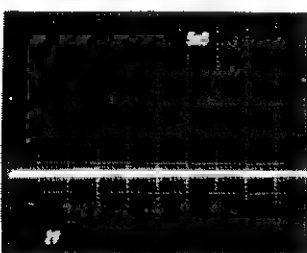
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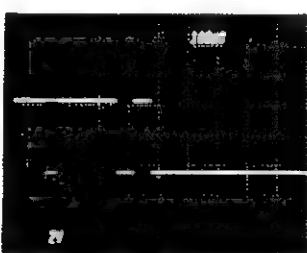
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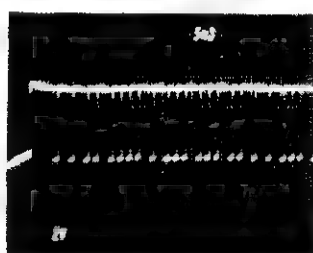
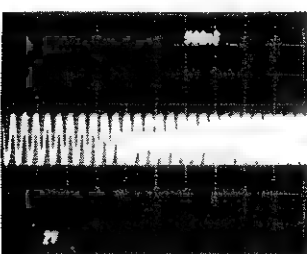
(54) U6101 Pin 22



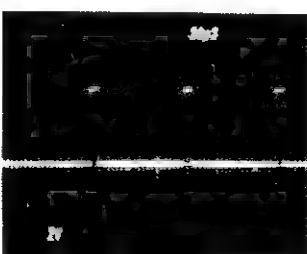
(55) U6101 Pin 23



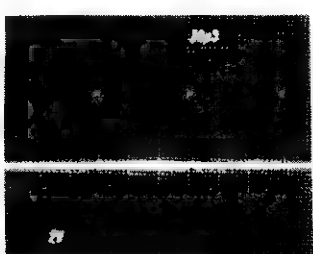
(56) U6101 Pin 24

(57) U6102 Pin 12
CRK36 Pause Button Depressed

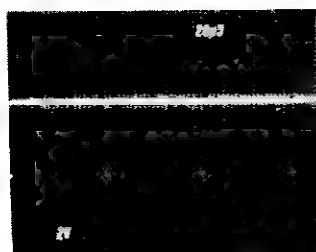
(58) U6103 Pin 1



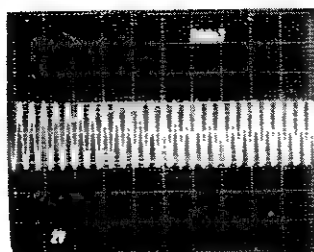
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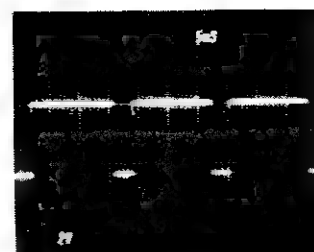
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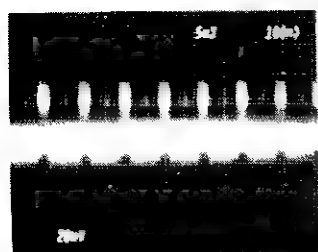
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(62) U6103 Pin 5



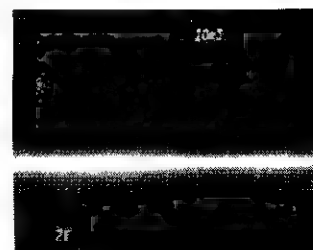
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(64) U6103 Pin 10



(65) U6103 Pin 11



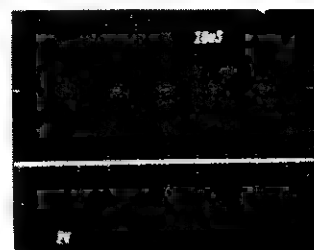
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(67) U6103 Pin 13



(68) U6103 Pin 14



(69) U6103 Pin 15



(70) U6103 Pin 16



(71) U6103 Pin 17



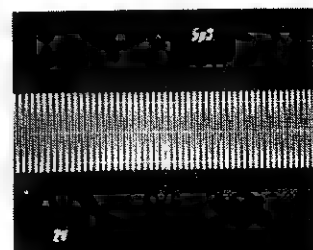
(72) U6103 Pin 18



(73) U6103 Pin 19



(74) U6103 Pin 23



(75) U6103 Pins 26 & 27

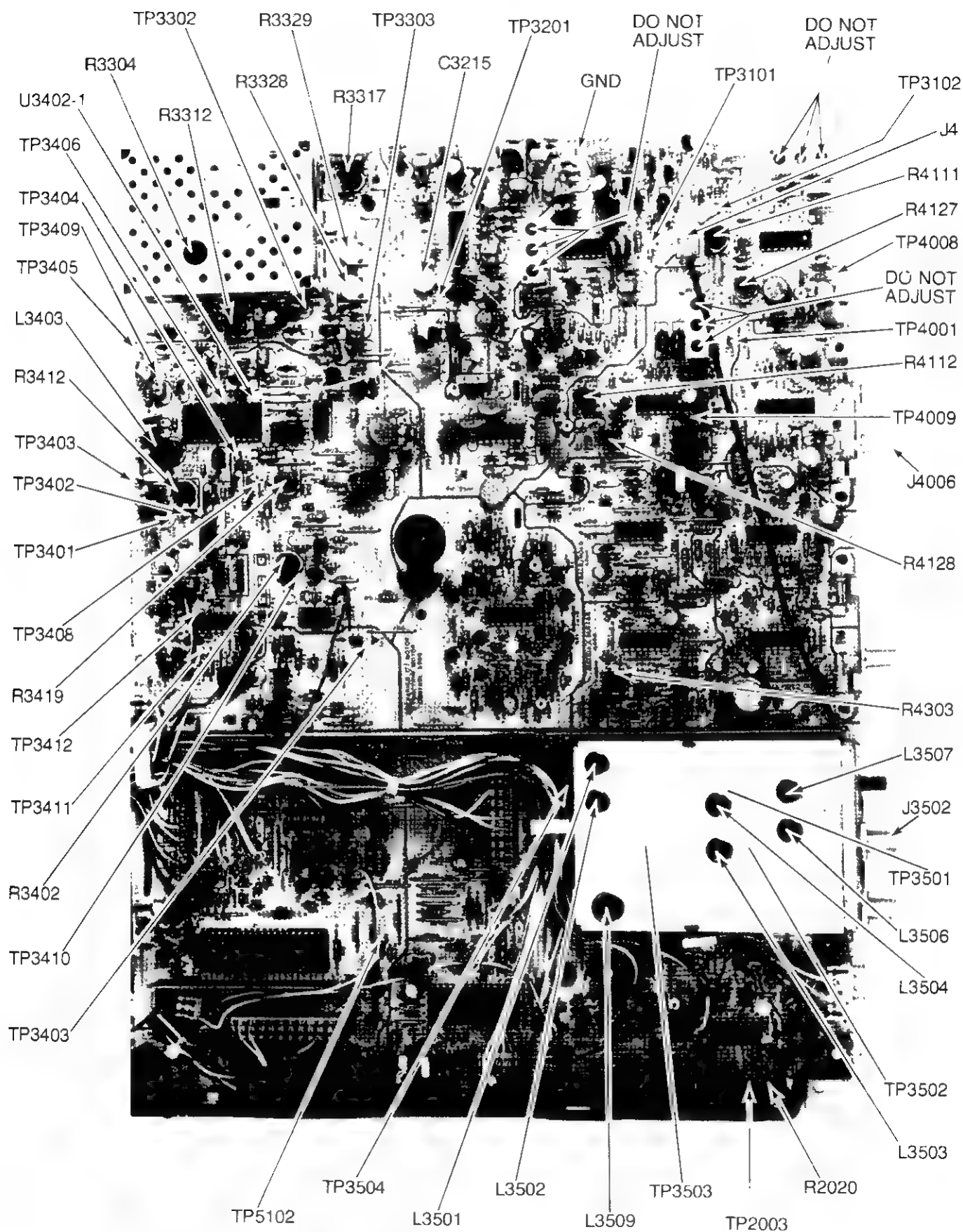
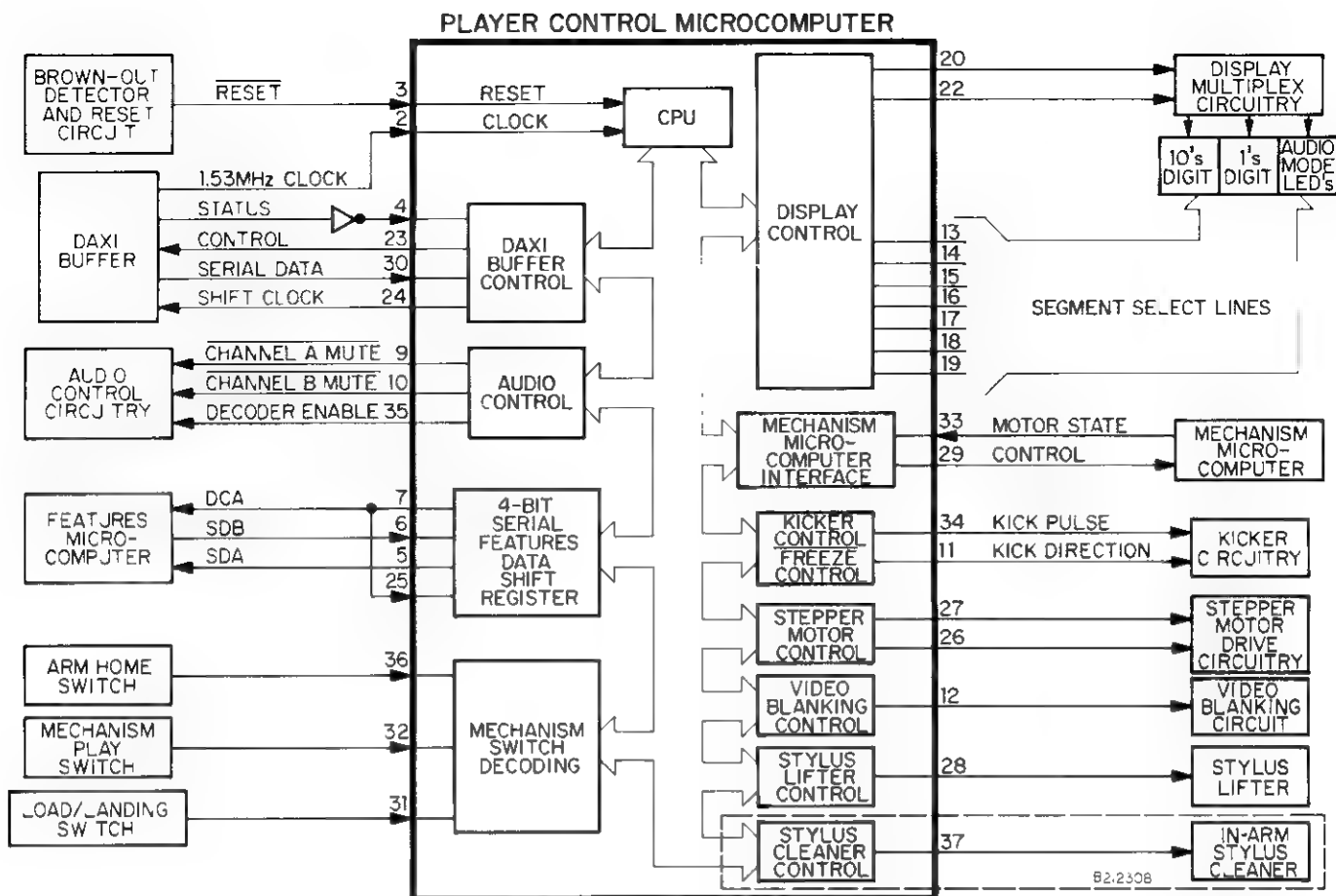
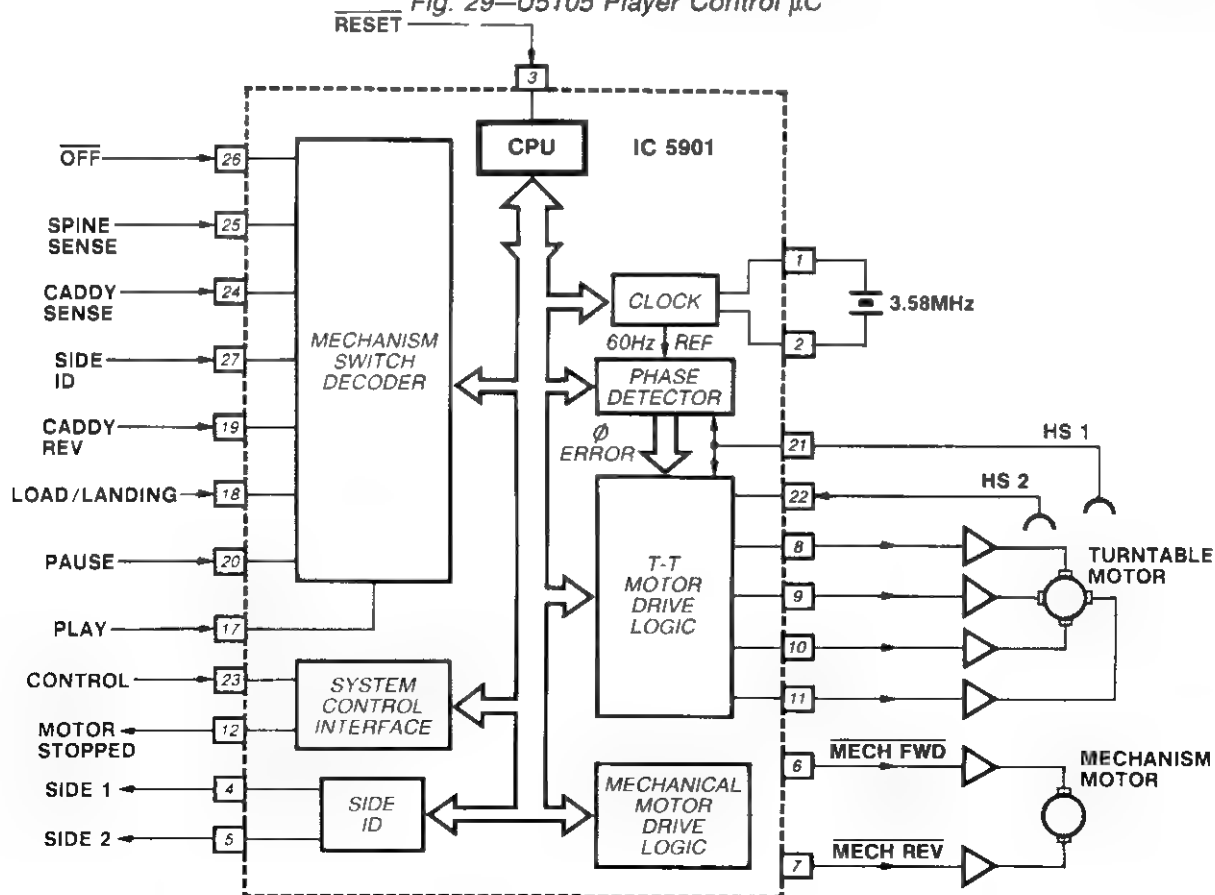


Fig 28—Adjustment Points

Fig. 29—U5105 Player Control μ C



STAR or SHADING (*)
See PRODUCT SAFETY NOTICE
on page 2 of Basic Service Data.

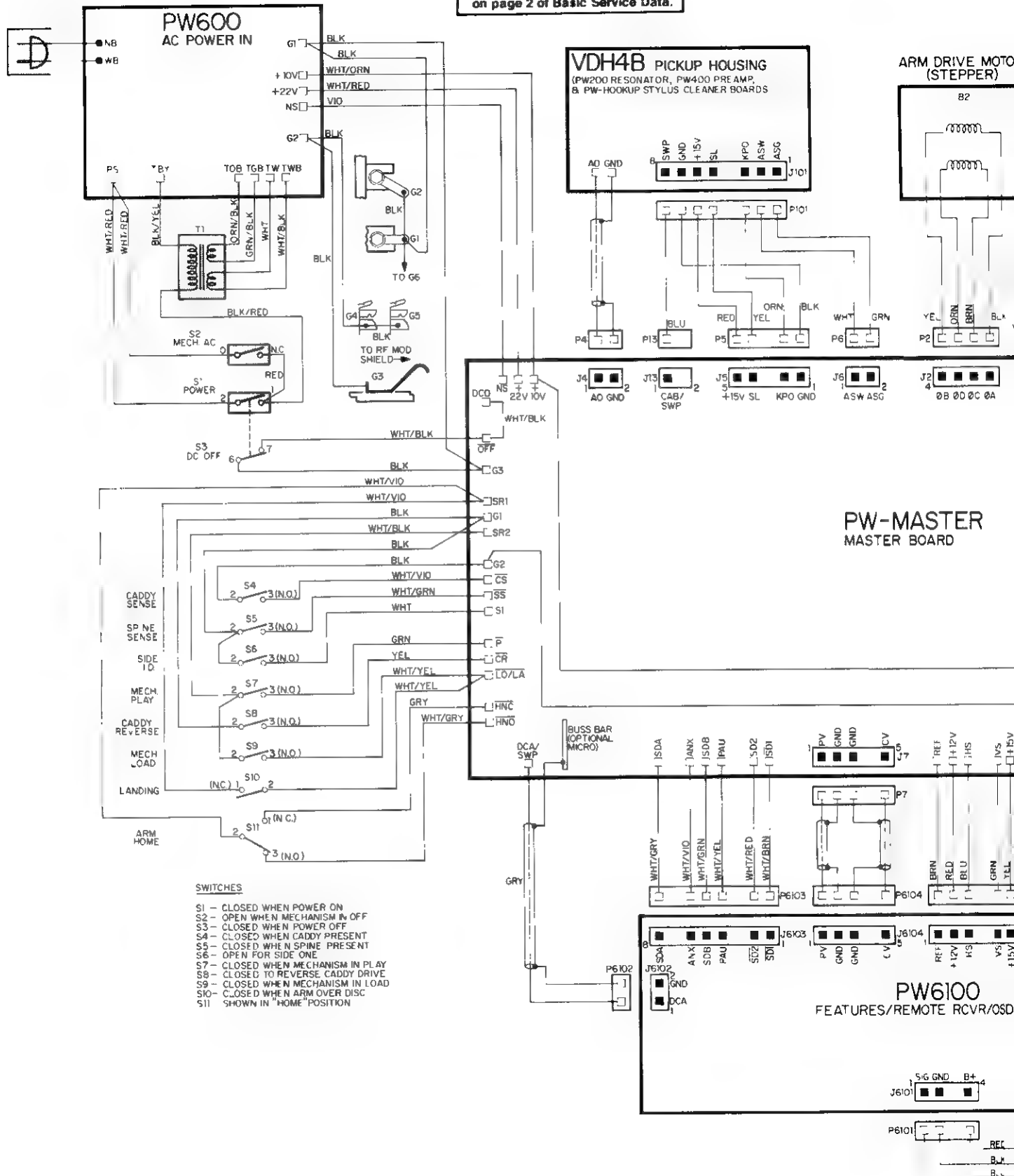
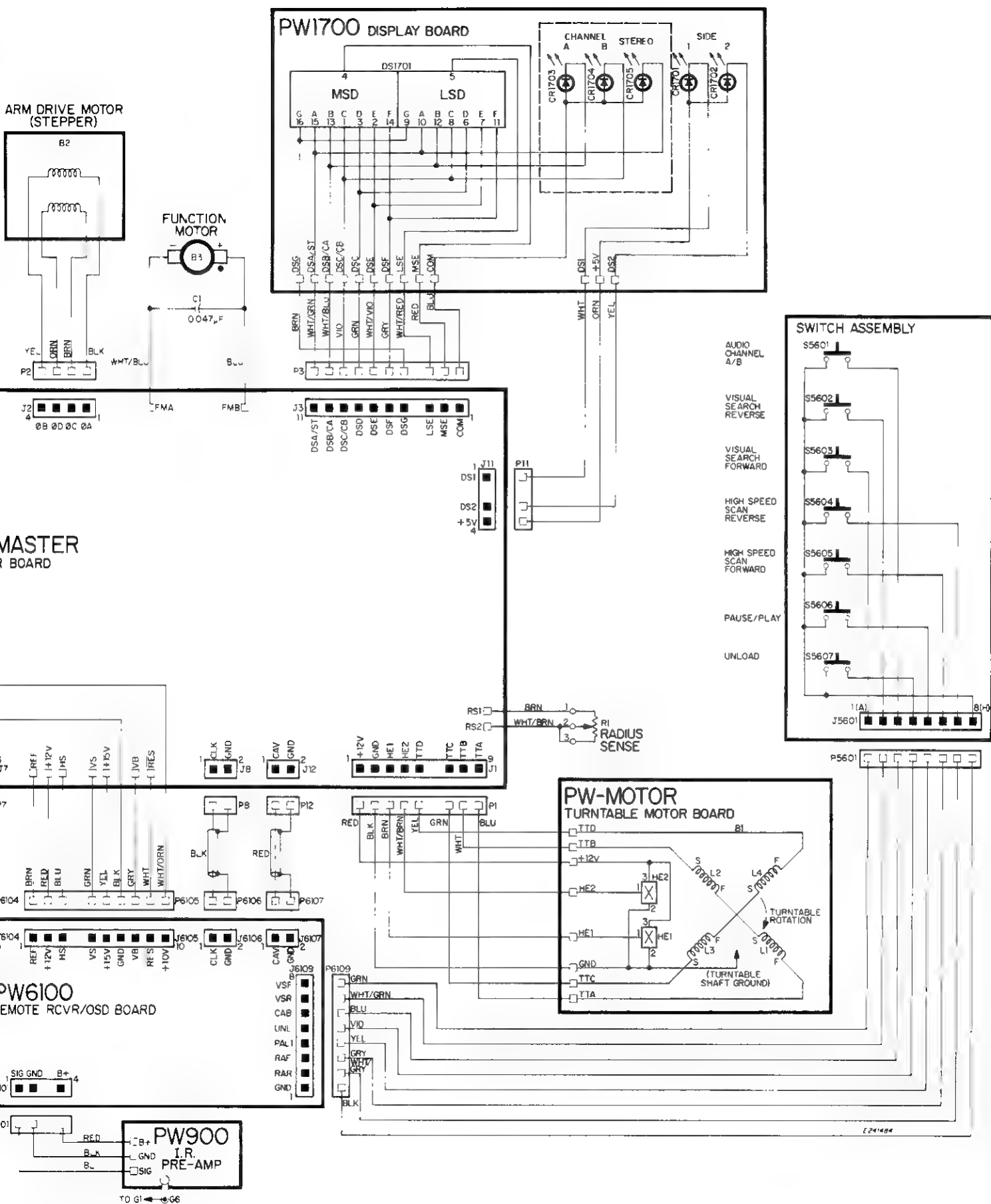
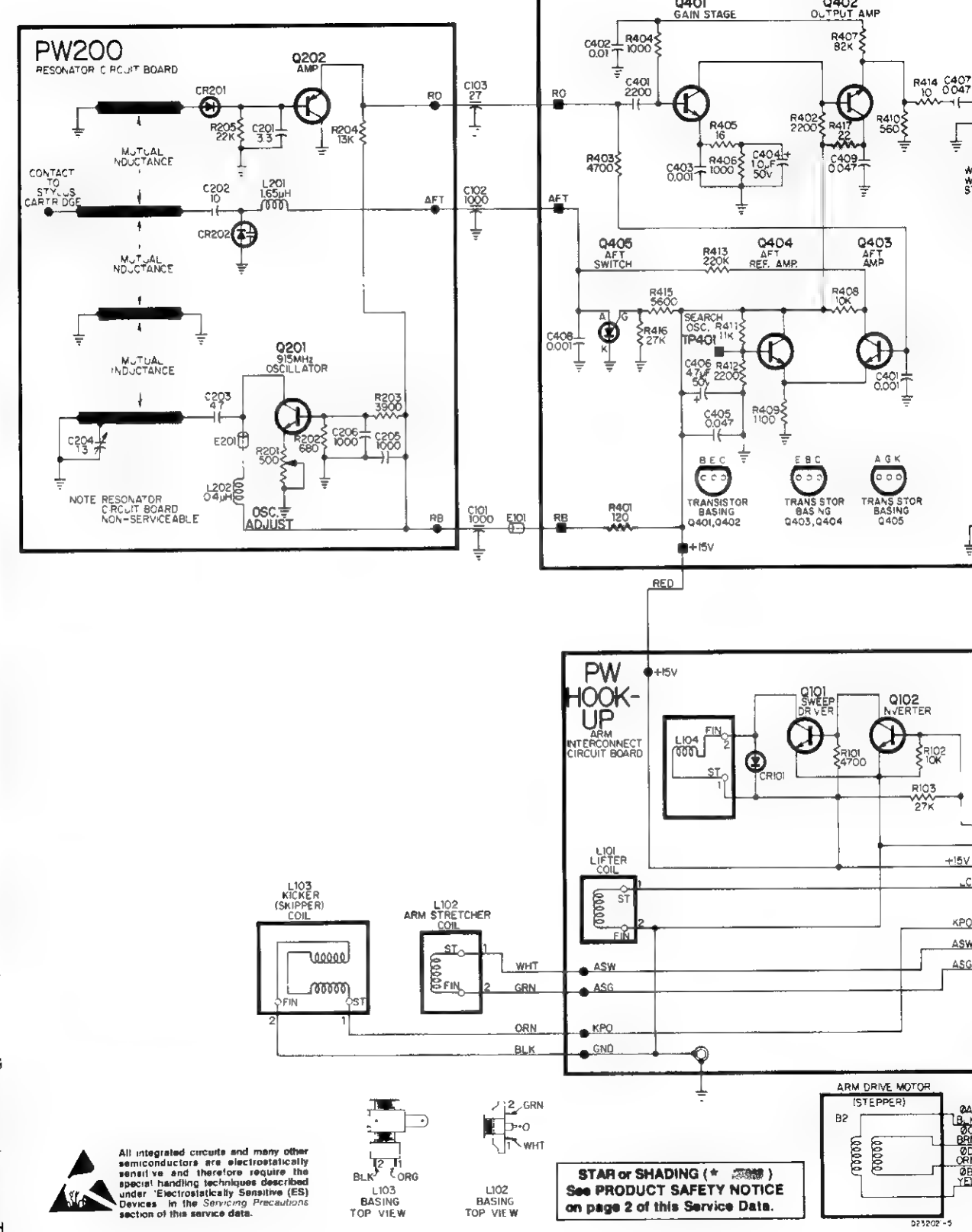
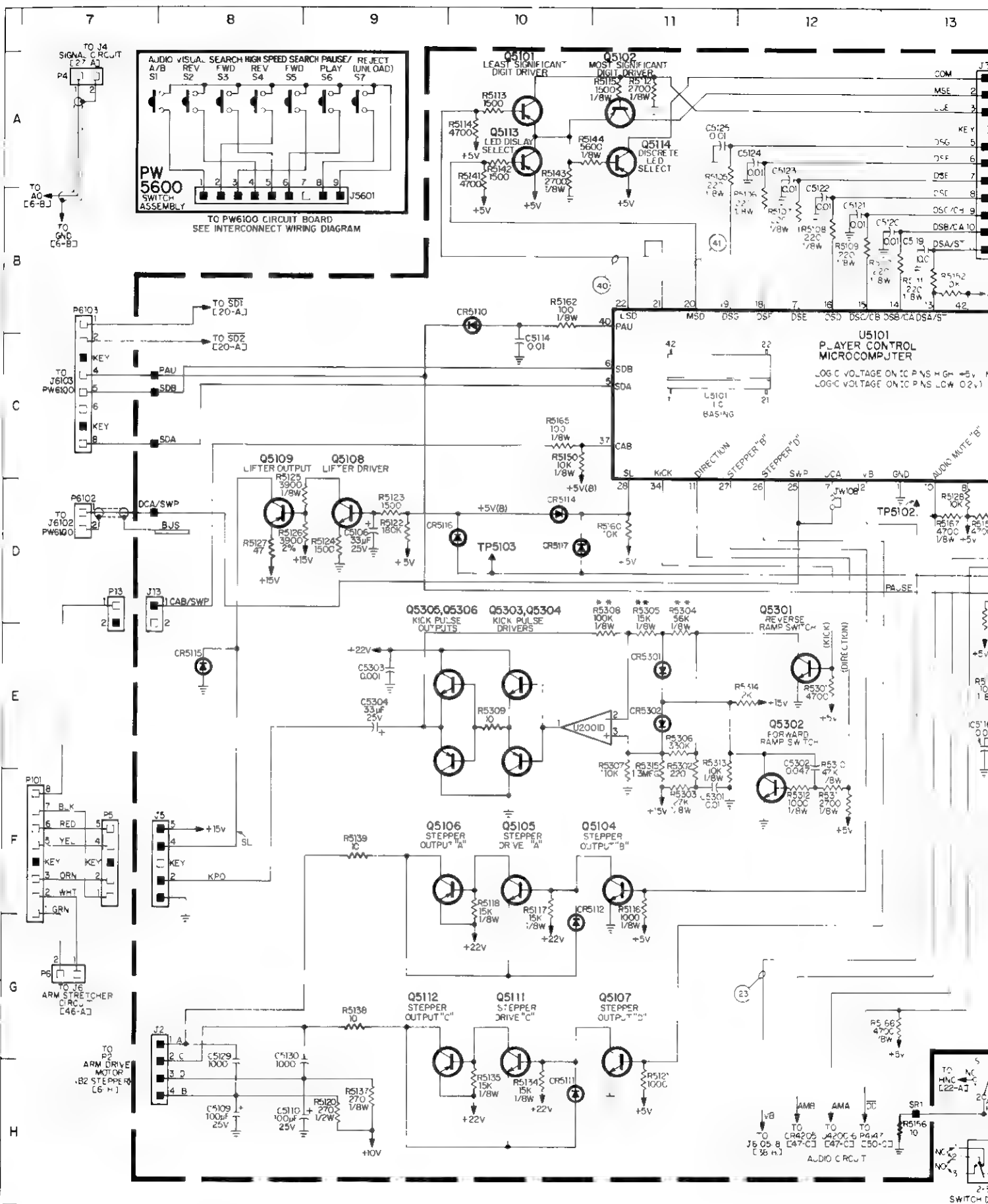


Fig. 32—Interconnect





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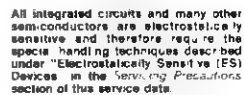




1

Player/Mechanism Control





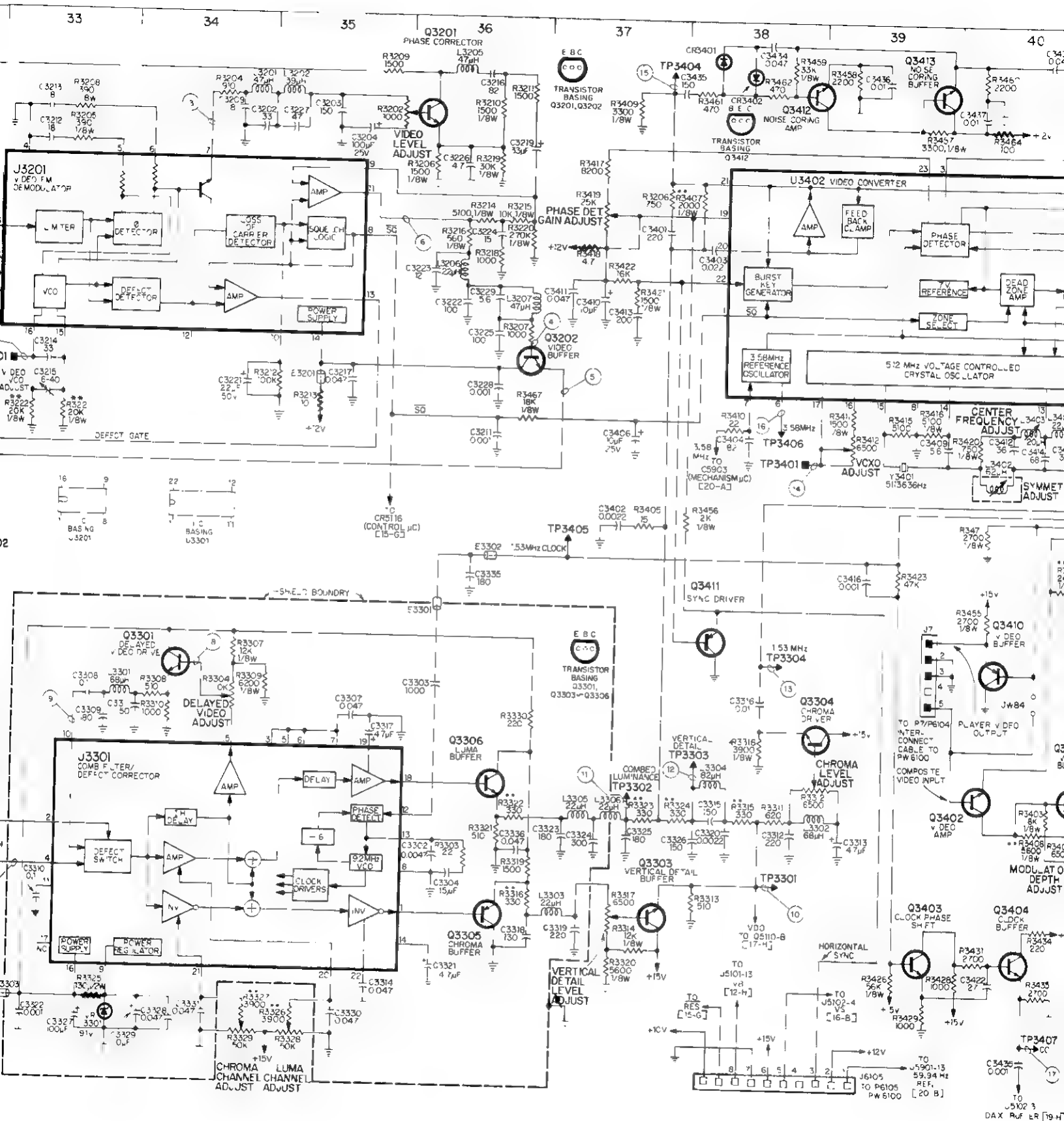
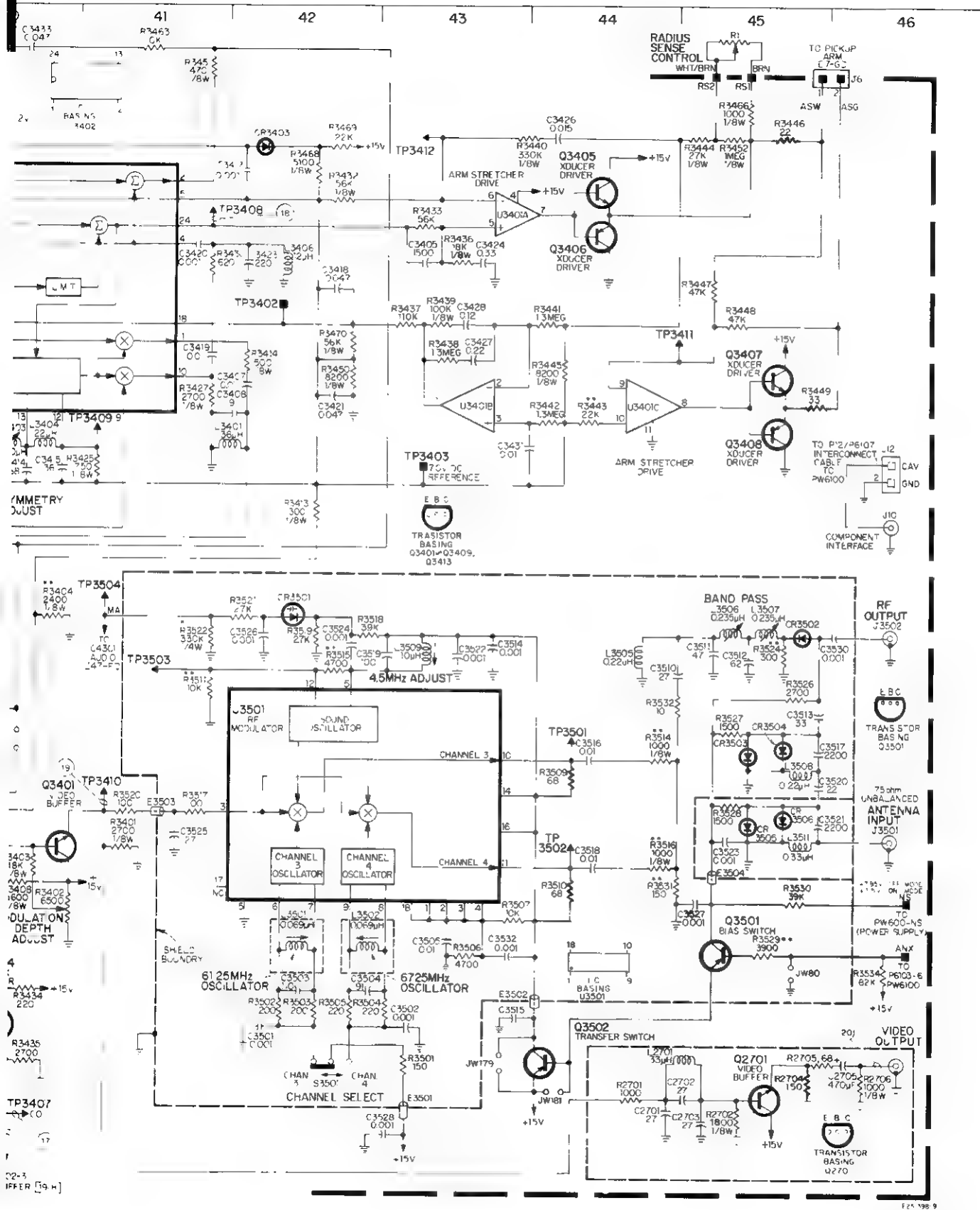
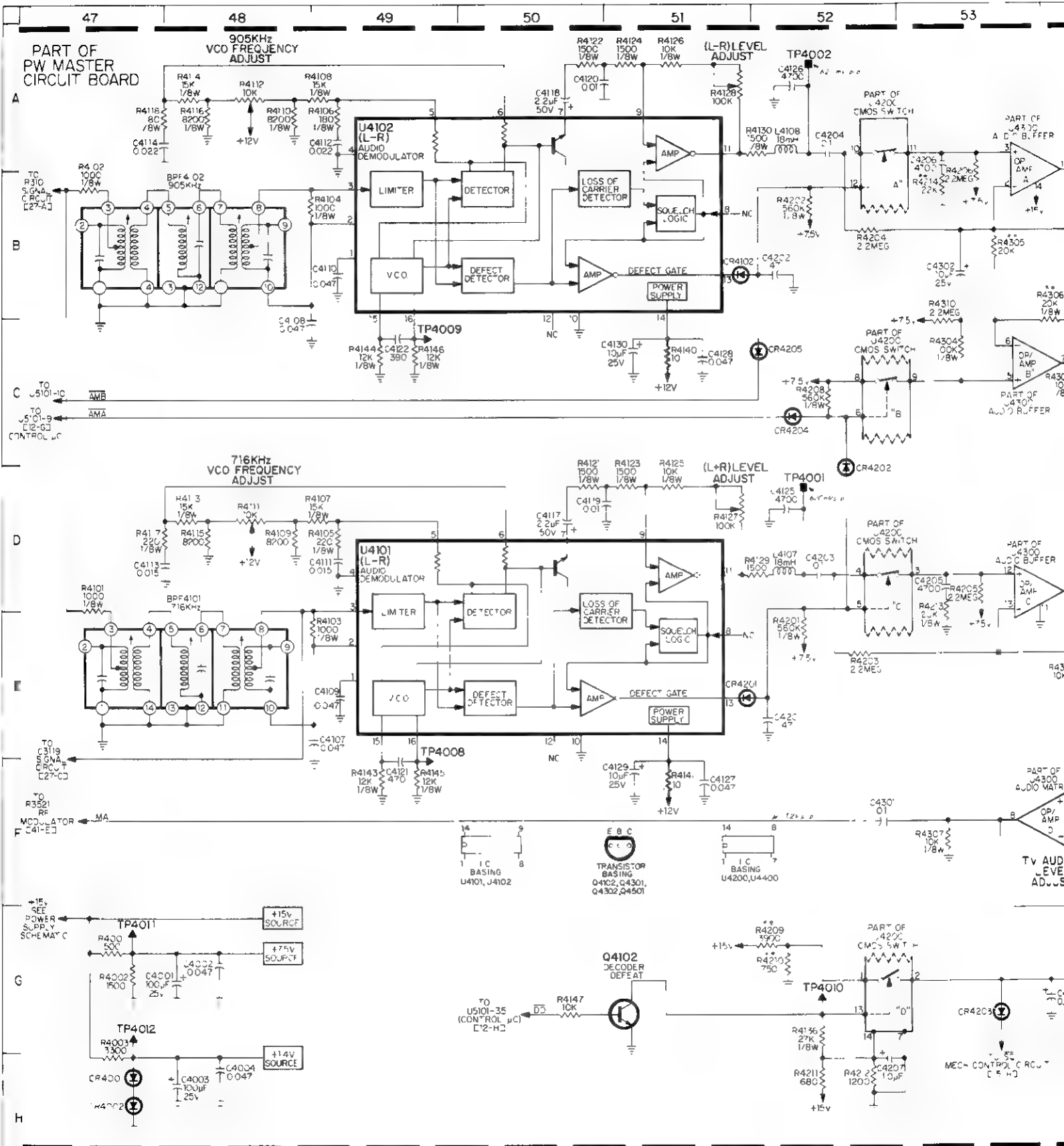
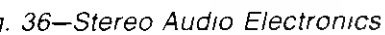


Fig. 35—Signal Processing Electronics







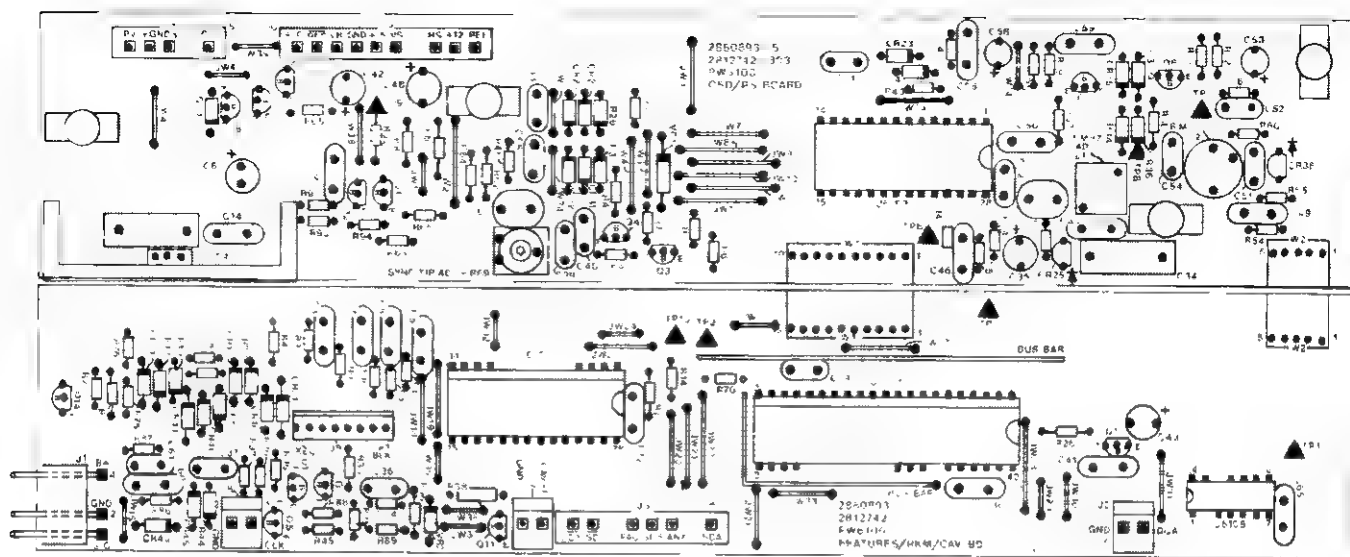


Fig. 37—PW6100 Circuit Board Assembly

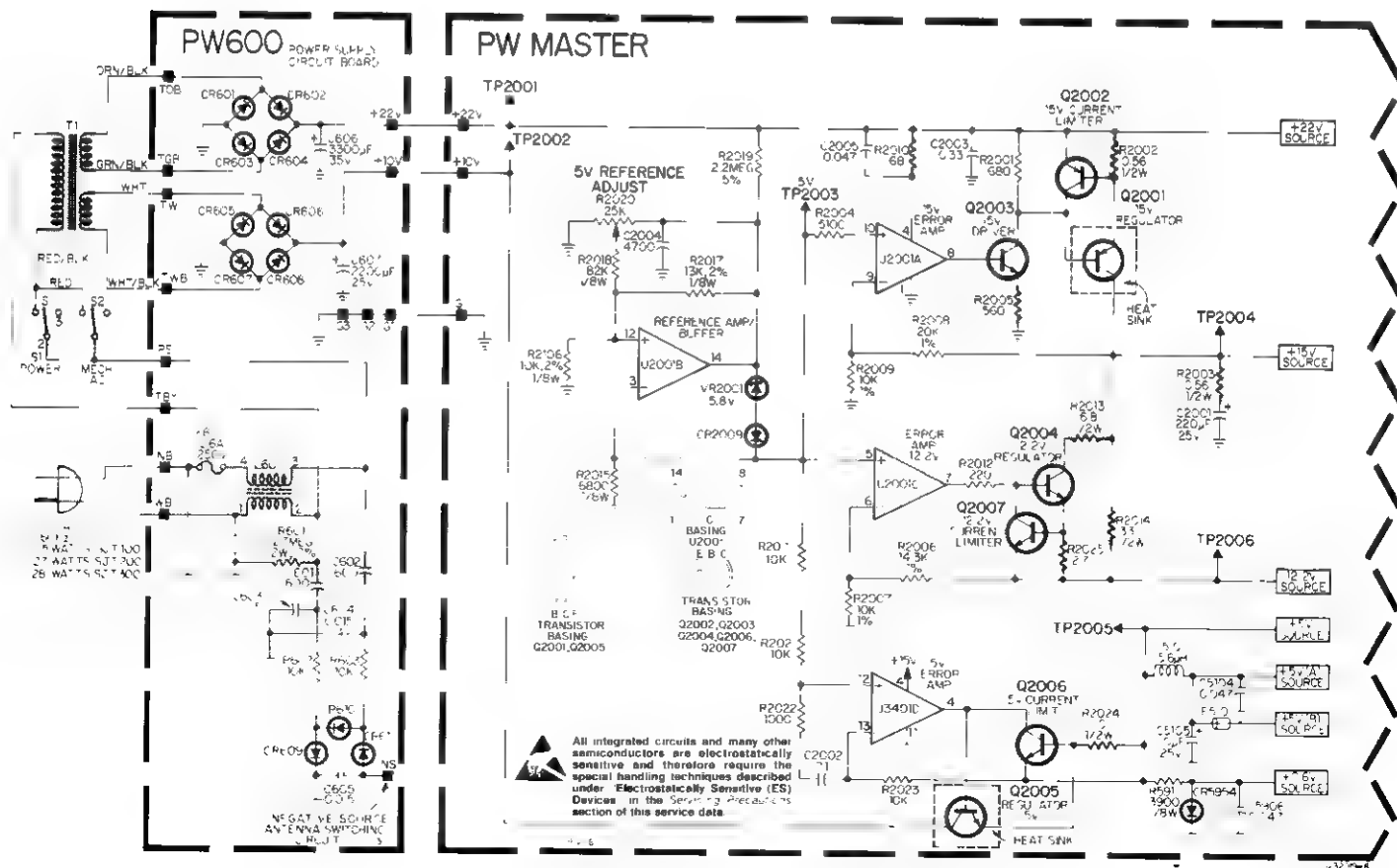
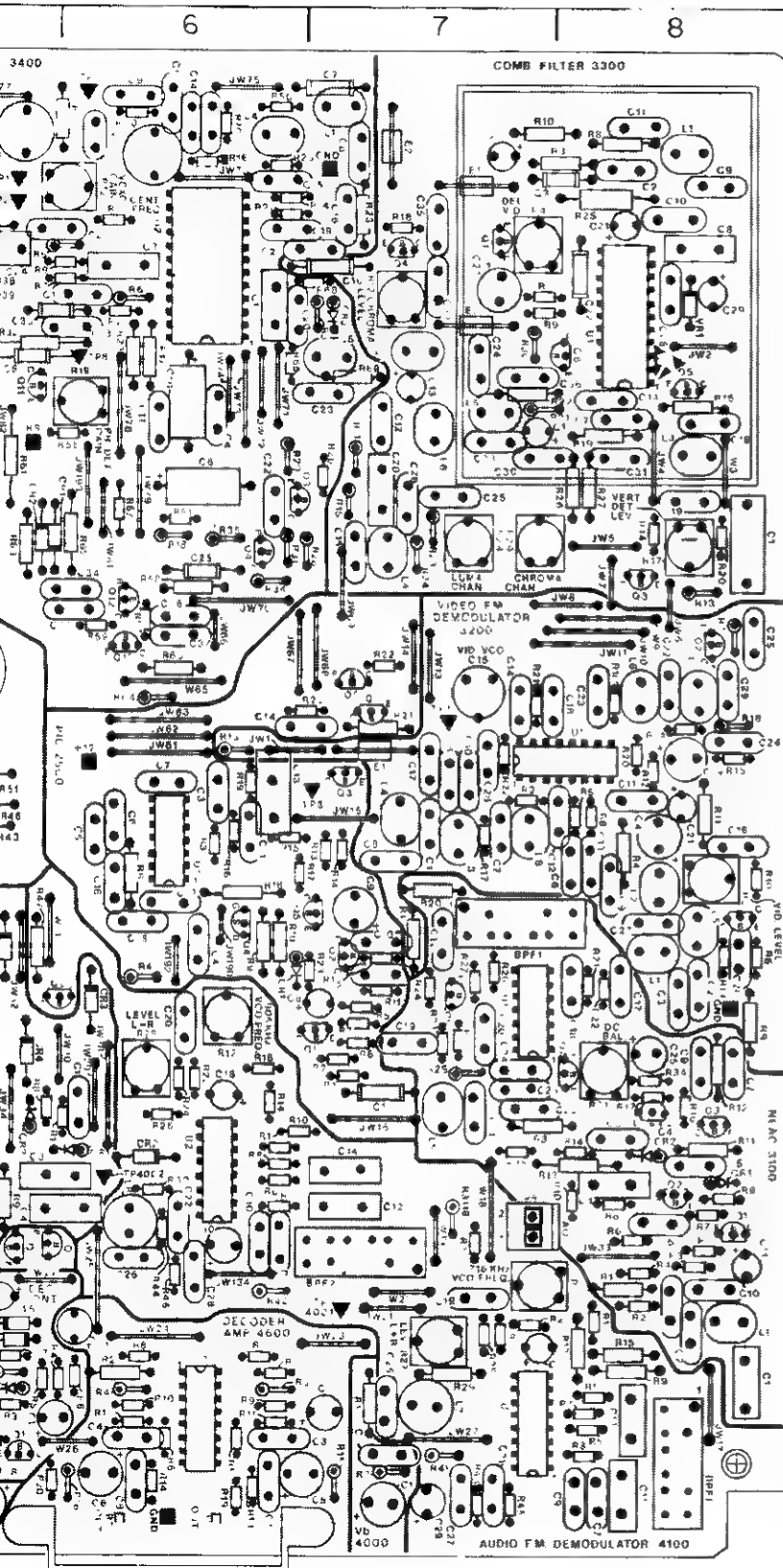


Fig. 38—Power Supply Electronics

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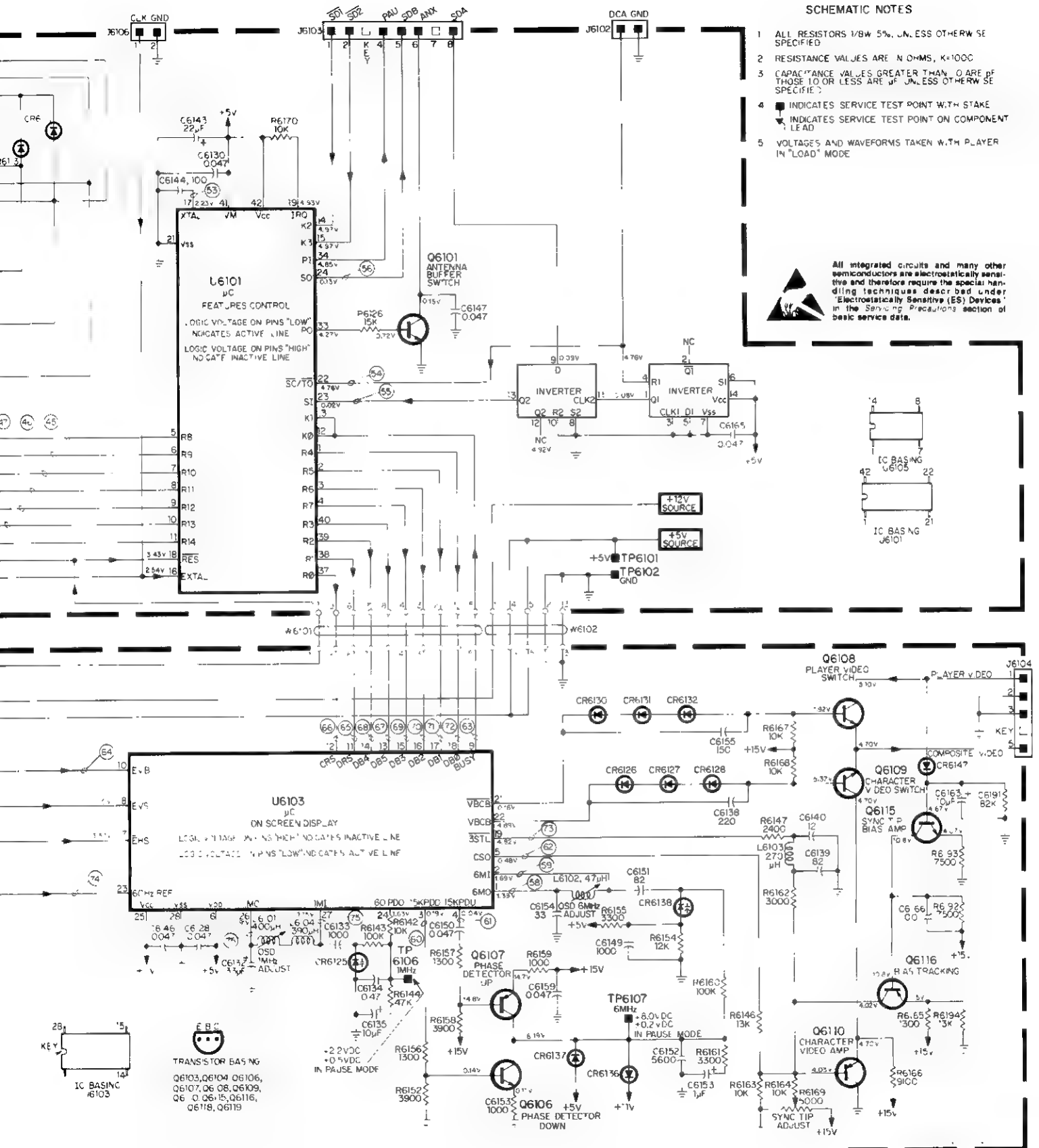
Component Location Guide

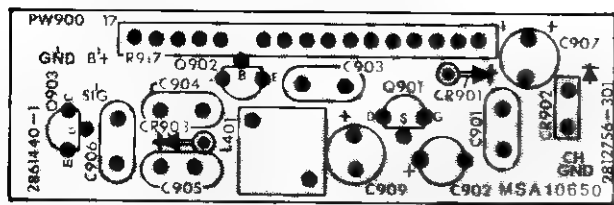


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8PF4101	8F	C3310	8A	C3523	2F	C5302	2F	CR5907	1E
8PF4102	7E	C3311	8A	C3524	3E	C5303	1F	CR5921	4C
C2001	1D	C3312	7B	C3525	3D	C5304	1F	CR5922	3C
C2002	4A	C3313	7B	C3526	3E	C5306	1F	CR5923	4D
C2003	1E	C3314	8B	C3527	2E	C5901	2C	CR5931	4C
C2004	1F	C3315	7B	C3528	4E	C5902	1C	CR5932	3C
C2005	1C	C3316	7A	C3530	3F	C5903	1C	CR5933	4D
C2501	7D	C3317	7B	C3532	3E	C5904	1C	CR5941	5C
C2503	6C	C3318	8B	C3533	3E	C5905	1C	CR5942	3C
C2504	6D	C3319	8B	C4001	7F	C5906	3C	CR5943	5D
C2505	6D	C3320	7B	C4002	7F	C5907	3C	CR5951	5C
C2506	6C	C3321	8A	C4003	5F	C5908	2D	CR5952	3C
C2507	6C	C3322	8A	C4004	5F	C5909	2D	CR5953	5D
C2508	7D	C3323	7B	C4107	8F	C5910	1C	CR5954	3C
C2509	7D	C3324	7B	C4108	6E	C5911	2D	E3201	7C
C2510	7D	C3325	7B	C4109	8F	C5912	1D	E3301	7A
C2511	6D	C3326	7B	C4110	6E	C5913	3C	E3302	7A
C2512	6D	C3327	7A	C4111	8F	C5914	3C	E3303	7B
C2513	6C	C3328	8A	C4112	7E	C5915	3D	E3501	4F
C2514	6C	C3329	8A	C4113	8F	C5916	3C	E3502	2E
C2515	6D	C3330	7B	C4114	7E	C5917	2D	E3503	3D
C2516	6D	C3331	8B	C4117	7F	C5918	1D	E3504	2E
C2517	7D	C3333	7A	C4118	6E	C5919	1D	J1	3D
C2701	4E	C3335	7A	C4119	7E	C5920	3C	J2	3B
C2702	4E	C3336	7B	C4120	6D	C5921	4D	J3	1B
C2703	4E	C3401	6A	C4121	7F	C5922	1C	J4	7E
C2705	4F	C3402	6A	C4122	6E	C5931	4D	J5	1F
C3101	8F	C3403	6A	C4125	7F	C5941	4D	J6	4A
C3102	8E	C3404	6B	C4126	6E	C5951	4D	J7	5B
C3103	8E	C3405	5B	C4127	7F	CR2009	1E	J8	3A
C3104	8E	C3406	6B	C4128	6E	CR2501	6D	J9	1A
C3105	8E	C3407	7A	C4129	7F	CR3101	8E	J11	1C
C3106	8E	C3408	7A	C4130	6E	CR3102	8E	J12	5F
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C3110	8E	C3412	6A	C4204	5E	CR3501	2D	3105	7E
C3111	8E	C3413	6B	C4205	4E	CR3502	3F	3201	8D
C3112	7D	C3414	6A	C4206	5E	CR3503	3F	L3202	8D
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C3119	7D	C3417	6B	C4302	4E	CR3506	2F	L3205	8D
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C3122	7E	C3420	6B	C4403	4E	CR4102	6E	3208	7D
C3123	7D	C3421	6A	C4404	4F	CR4201	6E	3301	8A
C3124	7D	C3422	6B	C4501	5F	CR4202	5E	3302	7B
C3125	8D	C3423	7B	C4502	5E	CR4203	6D	3303	8B
C3201	7C	C3424	5A	C4601	7F	CR4204	5D	3304	7A
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C3203	8D	C3426	5A	C4603	6F	CR4401	5F	3306	7B
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C3205	7C	C3428	5A	C4605	6F	CR4403	5F	3402	5A
C3206	8D	C3429	5B	C4606	6F	CR4404	4E	3403	6A
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C3219	8C	C3506	3E	C5111	3A	CR5107	3B	L4107	7F
C3221	8C	C3507	3E	C5114	2A	CR5108	3B	L4108	6E
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C3303	7A	C3518	3E	C5127	3B	CR5902	1D	Q2502	7D
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C3307	8B	C3520	2F	C5129	3B	CR5904	1D	Q2504	6D
C3308	8A	C3521	2F	C5130	3B	CR5905	2D	Q2505	7D

Q2506	7C	R2006	1E	R3206	8D	R3441	5A	R4121	7E	R4614	6F	R5901	1C	U4200	5E	TP2502	6D
Q2507	7C	R2007	2E	R3207	8C	R3442	4A	R4122	6D	R4615	7F	R5902	2E	U4300	4E	TP2503	7C
Q2701	4E	R2008	1E	R3208	8C	R3443	4A	R4123	7E	R4616	6F	R5903	1E	J4400	4F	TP3101	7E
Q3101	8E	R2009	1E	R3209	8D	R3444	5A	R4124	6D	R4619	6F	R5904	1D	J4500	5F	TP3102	8E
Q3102	8E	R2010	1E	R3210	8D	R3445	5A	R4125	7E	R4620	5F	R5905	2D	J4600	6F	TP3201	7C
Q3103	8E	R2011	1D	R3211	8C	R3446	4A	R4126	6E	R5101	1A	R5906	1D	U5101	2A	TP3202	8C
Q3104	8E	R2012	1E	R3212	8C	R3447	4A	R4127	7E	R5102	3B	R5907	1C	J5102	3A	TP3301	7B
Q3105	7D	R2013	1E	R3213	6C	R3448	4A	R4128	6D	R5103	3B	R5908	1C	J5901	1C	TP3302	7B
Q3107	8D	R2014	1E	R3214	8C	R3449	4A	R4129	7F	R5104	3A	R5909	1C	U5902	4D	TP3303	7B
Q3201	8D	R2015	1E	R3215	8C	R3450	6A	R4130	6E	R5105	1B	R5910	1C	VR2001	1F	TP3304	6A
Q3202	8C	R2016	1E	R3216	8C	R3451	6B	R4136	5E	R5106	1B	R5911	3C	VR3301	8A	TP3401	5A
Q3301	7A	R2017	1E	R3217	7D	R3452	5A	R4140	6E	R5107	1B	R5913	2D	VR5101	2A	TP3402	6A
Q3303	8C	R2018	1E	R3218	8C	R3453	5B	R4141	7F	R5108	1B	R5914	2D	Y3401	6A	TP3403	6A
Q3304	7A	R2019	1F	R3219	8D	R3454	5B	R4143	7F	R5109	1B	R5915	1E	Y5901	1C	TP3404	8A
Q3305	8B	R2020	1F	R3220	8C	R3455	5B	R4144	6E	R5110	1B	R5916	1D			TP3405	7A
Q3306	8B	R2021	1A	R3221	7C	R3456	6B	R4145	7F	R5111	1B	R5917	2D	STAKES			
Q3401	5B	R2022	4B	R3222	7C	R3457	6C	R4146	6E	R5112	2B	R5919	1C	A1	2F	TP3407	8B
Q3402	5B	R2023	1A	R3303	7A	R3458	6C	R4147	5D	R5113	2B	R5920	1C	ANX	2E	TP3408	8B
Q3403	6B	R2024	1A	R3304	7A	R3459	6C	R4201	6E	R5114	2B	R5921	4C	AO	7E	TP3409	8A
Q3404	6B	R2025	1E	R3307	7A	R3460	6C	R4202	5D	R5115	1B	R5922	4C	ASG	4A	TP3410	5B
Q3405	5A	R2501	7D	R3308	8A	R3461	5B	R4203	5E	R5116	3B	R5923	4D	ASW	4A	TP3411	4A
Q3406	5A	R2502	7D	R3309	7B	R3462	6B	R4204	5E	R5117	3B	R5924	4D	CAB	3A	TP3412	5A
Q3407	4A	R2503	6D	R3310	7A	R3463	5B	R4205	4E	R5118	3B	R5925	4D	CH3	3F	TP3501	3E
Q3408	4A	R2504	6D	R3311	7B	R3464	6C	R4206	5E	R5120	3B	R5926	4D	CH4	3F	TP3502	3E
Q3409	4B	R2505	7D	R3312	7A	R3465	6B	R4208	5E	R5121	2B	R5927	2C	CR	2D	TP3503	3E
Q3410	5B	R2506	7D	R3313	8C	R3466	5A	R4209	5E	R5122	4B	R5928	2C	CS	2C	TP3504	3D
Q3411	5B	R2507	7D	R3314	8B	R3467	6B	R4210	5E	R5123	4B	R5929	1D	CV	5B	TP4001	7E
Q3412	6C	R2508	8D	R3315	7B	R3468	7A	R4211	5E	R5124	4B	R5930	2D	DOO	1A	TP4002	6E
Q3413	6C	R2509	6D	R3316	8B	R3469	7B	R4212	5E	R5125	4B	R5931	4D	DS1	1C	TP4003	5F
Q3501	2E	R2510	6D	R3317	8B	R3470	6A	R4213	4E	R5126	4B	R5932	4D	DS2	1D	TP4006	6E
Q3502	2E	R2511	7D	R3318	7A	R3471	5B	R4214	5E	R5127	4B	R5933	4D	FMA	1D	TP4007	5E
Q4102	5D	R2512	7D	R3319	8B	R3501	4F	R4301	4E	R5128	1A	R5934	4D	FMB	1E	TP4008	7F
Q4301	5E	R2513	7D	R3320	8B	R3502	3E	R4302	4E	R5129	2A	R5935	4C	G1	3C	TP4009	6E
Q4302	5E	R2514	7D	R3321	7B	R3503	3E	R4303	4D	R5130	3B	R5936	4D	G2	4C	TP4010	5D
Q4501	5F	R2515	6D	R3322	7B	R3504	3E	R4304	4E	R5131	3B	R5937	4C	G3	4C	TP4011	7F
Q5101	2B	R2516	6D	R3323	7B	R3505	3E	R4305	4E	R5132	4B	R5938	4D	G4	3B	TP4012	5F
Q5102	1B	R2517	6D	R3324	7B	R3506	3E	R4306	4E	R5133	4B	R5939	5C	G5	2A	TP5101	1A
Q5103	3B	R2518	6D	R3325	8A	R3507	3E	R4307	4D	R5134	2B	R5940	5D	GND	4F	TP5102	2C
Q5104	2B	R2519	6C	R3326	8B	R3508	3F	R4308	5E	R5135	2B	R5941	5C	GND	5B	TP5103	4C
Q5105	3B	R2520	7E	R3327	8B	R3509	3E	R4309	4D	R5137	3C	R5942	5C	GND	7A	TP5901	4C
Q5106	3B	R2521	7E	R3328	7B	R3510	3E	R4310	5E	R5138	2B	R5943	5C	GND	8D	TP5902	4D
Q5107	2B	R2522	7E	R3329	7B	R3511	3E	R4311	5E	R5139	2B	R5944	5D	HNC	1D	TP5903	4C
Q5108	4B	R2523	7D	R3330	7B	R3512	3E	R4312	5E	R5140	2A	R5945	5D	HNO	3A	TP5904	4C
Q5109	4B	R2701	4D	R3401	5B	R3513	2E	R4313	4E	R5141	1B	R5946	5C	HS	5B	TP5905	5D
Q5110	4B	R2702	4E	R3402	5B	R3514	3E	R4314	4E	R5142	1B	R5947	2C	K0	2A	TP5906	5D
Q5111	2B	R2704	4E	R3403	5B	R3515	3E	R4315	4E	R5143	1B	R5948	2C	K1	2A	TP5907	5C
Q5112	2B	R2705	4E	R3404	5B	R3516	3E	R4316	4E	R5144	1B	R5949	2C	KPO	1F	TP5908	5D
Q5113	1C	R2706	4F	R3405	5A	R3517	3E	R4317	5E	R5145	2A	R5950	2A	MAV	4F		
Q5114	1B	R3101	8E	R3406	6A	R3518	2E	R4401	5F	R5146	2A	R5951	5D	NS	2E		
Q5115	2A	R3102	8E	R3407	6A	R3519	2D	R4402	4E	R5147	1A	R5952	5D	OFF	1D		
Q5116	1A	R3103	8E	R3408	5B	R3520	3D	R4403	4F	R5148	1A	R5953	5D	PAJ	3A		
Q5301	1F	R3104	8E	R3409	6A	R3521	2D	R4404	4E	R5149	2B	R5954	5D	PAJ	3C		
Q5302	2F	R3105	8E	R3410	5C	R3522	2D	R4407	4E	R5150	2A	R5955	5C	PV	5B		
Q5303	1F	R3106	8E	R3411	6A	R3523	3F	R4408	4F	R5151	1A	R5956	5D	RAF	3A		
Q5304	1F	R3107	8E	R3412	6A	R3524	3F	R4409	5F	R5152	1A	R5957	1C	RAR	3A		
Q5305	1F	R3108	8E	R3413	5B	R3527	3F	R4410	5E	R5153	3A	R5960	3C	REF	1D		
Q5306	1F	R3109	8E	R3414	6A	R3528	2F	R4411	4F	R5154	3A	R5961	3C	RF OUT	3F		
Q5901	1D	R3110	8E	R3415	6A	R3529	2E	R4501	5F	R5156	4C	R5962	4C	RS1	5A		
Q5902	2D	R3111	8E	R3416	6A	R3530	2E	R4502	5F	R5157	4C	R5963	4D	SD1	1C		
Q5903	1E	R3112	8D	R3417	6B	R3531	3E	R4503	5F	R5160	4B	R5964	5C	SD2	1C		
Q5904	2D	R3113	8E	R3418	6B	R3532	3E	R4504	5F	R5162	2A	R5965	5D	SDA	1A		
Q5905	1D	R3114	8E	R3419	6B	R3534	2E	R4505	5F	R5163	2A	R5966	3D	SDB	1A		
Q5906	1D	R3116	8E	R3420	6A	R4001	7F	R4506	6F	R5165	2A	R5967	3C	SI	1D		
Q5907	2C	R3117	8E	R3421	6B	R4002	7F	R4507	5F	R5166	3C	R5968	4C	SL	1F		
Q5908	1D	R3118	7E	R3422	6B	R4003	5F	R4508	5F	R5167	2C	R5969	4D	SR1	4C		
Q5909	1D	R3120	7D	R3423	7A	R4101	8E	R4509	5F	R5168	2A	R5970	5C	SR2	4C		
Q5921	4C	R3121	8D	R3424	7A	R4102	7E	R4510	5F	R5169	2B	R5971	5D	SS	2C		
Q5922	4C	R3122	8D	R3425	6A	R4103	8F	R4511	5F	R5170	2B	R5972	1D	SWP	3A		
Q5923	4C	R3123	7D	R3426	7B	R4104	6E	R4512	5E	R5301	2D	R5973	3C	JNL	2A		
Q5931	4D	R3124	7D	R3427	6A	R4105	8F	R4513	5E	R5302	2F	R5974	3D	VB	5B		
Q5932	4D	R3125	7D	R3428	7B	R4106	6E	R4601	6F	R5303	2F	R5975	3D	VO	4F		
Q5933	4D	R3126	7D	R3429	6B	R4107	8F	R4602	6F	R5304	2F	R5976	0	VS	4A		
Q5941	5C	R3127	7D	R3430	7A	R4108	6E	R4603	6F	R5305	1F	R5977	1D	VSF	3A		
Q5942	5C	R3129	7D	R3431	6B	R4109	8F	R4604	6F	R5306	2F	U2001	1E	VSR	3A		
Q5943	5C	R3130	7E	R3432	5A	R4110	6E	R4605	6F	R5307	2E	U2501	6D				
Q5951	5D	R3131	8D	R3433	5B	R4111	7E	R4606	6F	R5308	1F	U3101	7E	TEST POINTS			
Q5952	5D	R3134	8D	R3434	6C	R4112	6D	R4607	6F	R5309	1F	J3201	8C	TP2001	1E		
Q5953	5D	R3135	7E	R3435	6B	R4113	8E	R4608	6F	R5310	2F	J3301	8B	TP2002	1A		
R2001	1E	R3201	7D	R3436	5A	R4114	6E	R4609	6F	R5311	2C	U3401	4A	TP2003	1E		
R2002	1E	R3202	8D	R3437	5A	R4115	8F	R4610	6F	R5312	2F	U3402	6A	TP2004	5B		
R2003	1E	R3203	7C	R3438	5A	R4116	6D	R4611	8F	R5313	1F	J3501	3E	TP2005	2C		
R2004	1E	R3204	8D	R3439	5A	R4117	8F	R4612	6F	R5314	2F	J4101	7F	TP2006	6C		
R2005	1E	R3205	8C	R3440	5A	R4118	6E	R4613	6F	R5315	2E	J4102	5E	TP2501	7D		







NOTE: Add 900 Series Prefix to Item Numbers

Fig. 41—PW 900 Circuit Board Assembly (SJT 300)

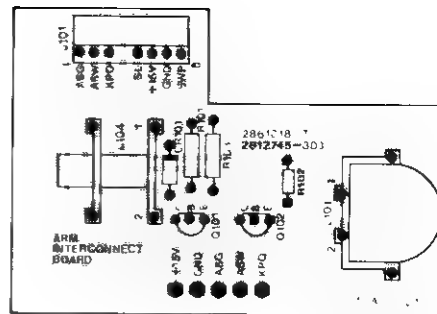
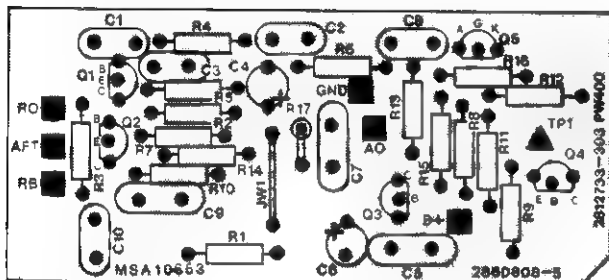
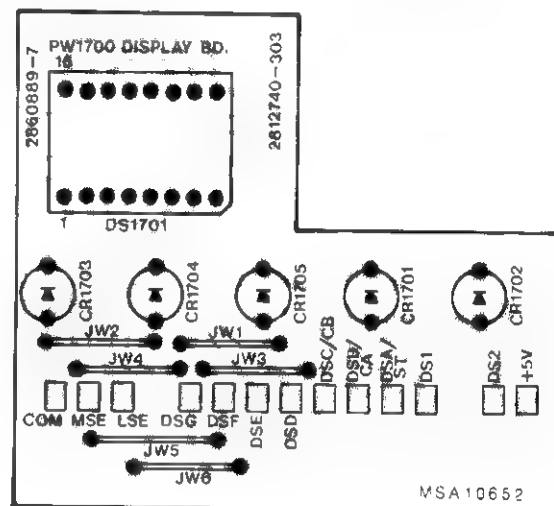


Fig. 42—PW Arm Interconnect Circuit Board Assembly



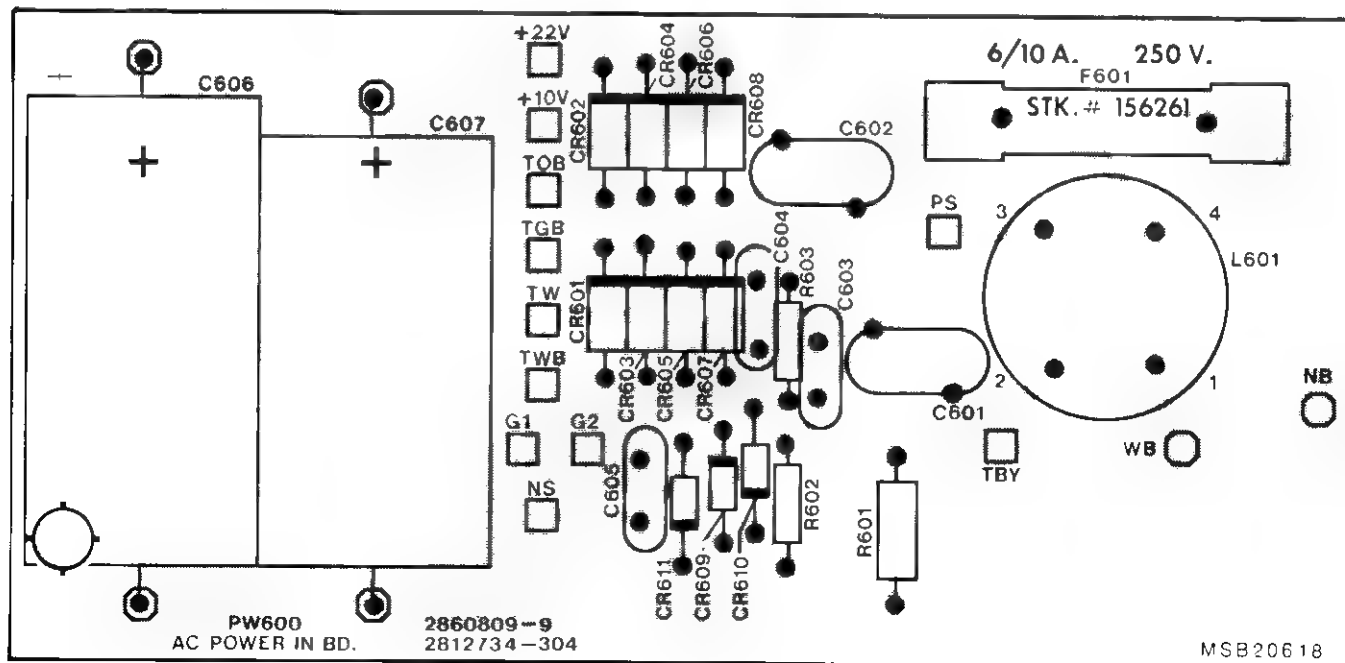
NOTE: Add 400 Series Prefix to Item Numbers

Fig. 43—PW 400 Circuit Board Assembly



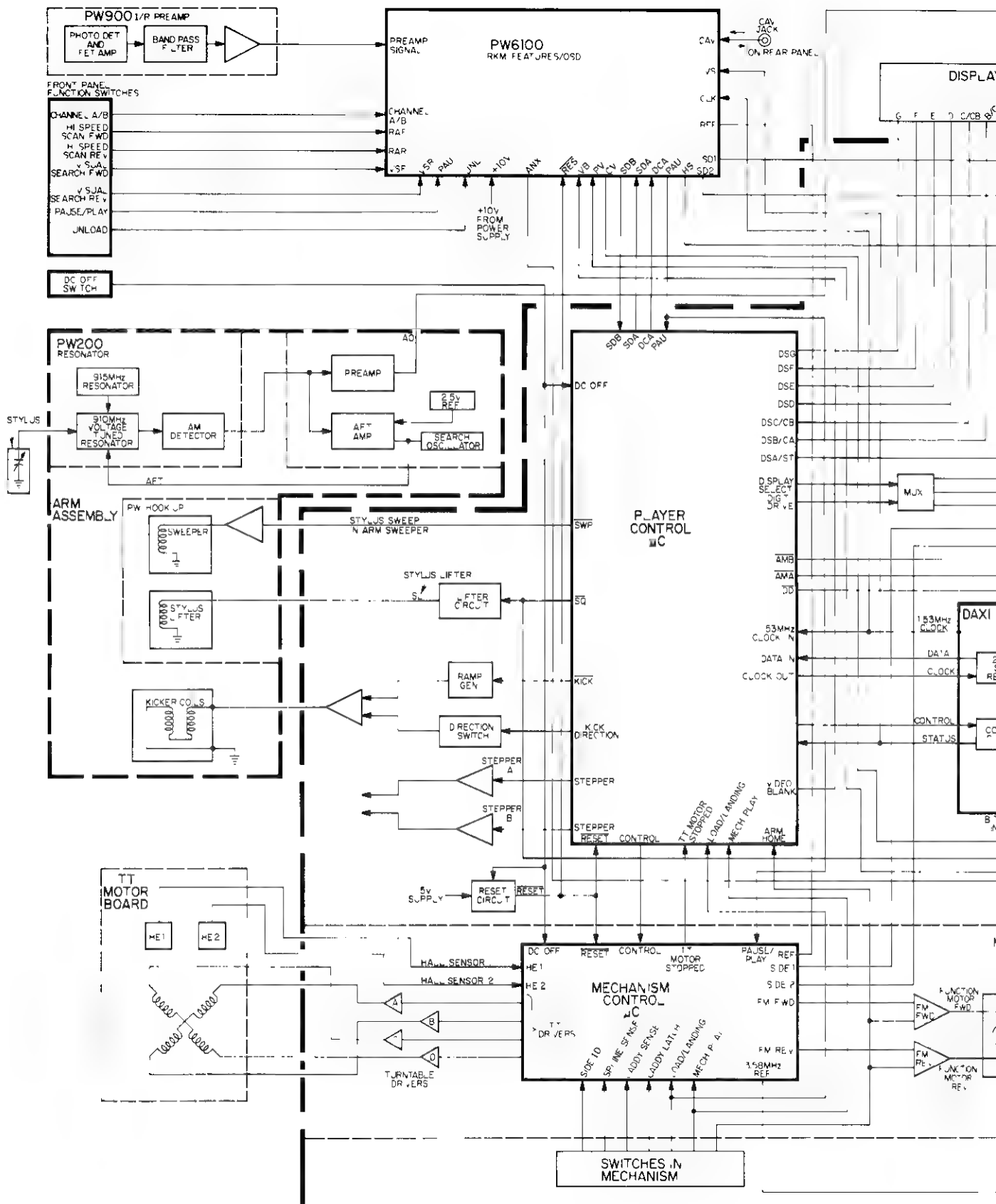
NOTE: Add 1700 Series Prefix to Item Numbers

Fig. 44—PW 1700 Circuit Board Assembly



NOTE: Add 600 Series Prefix to Item Numbers

Fig. 45—PW 600 Circuit Board Assembly



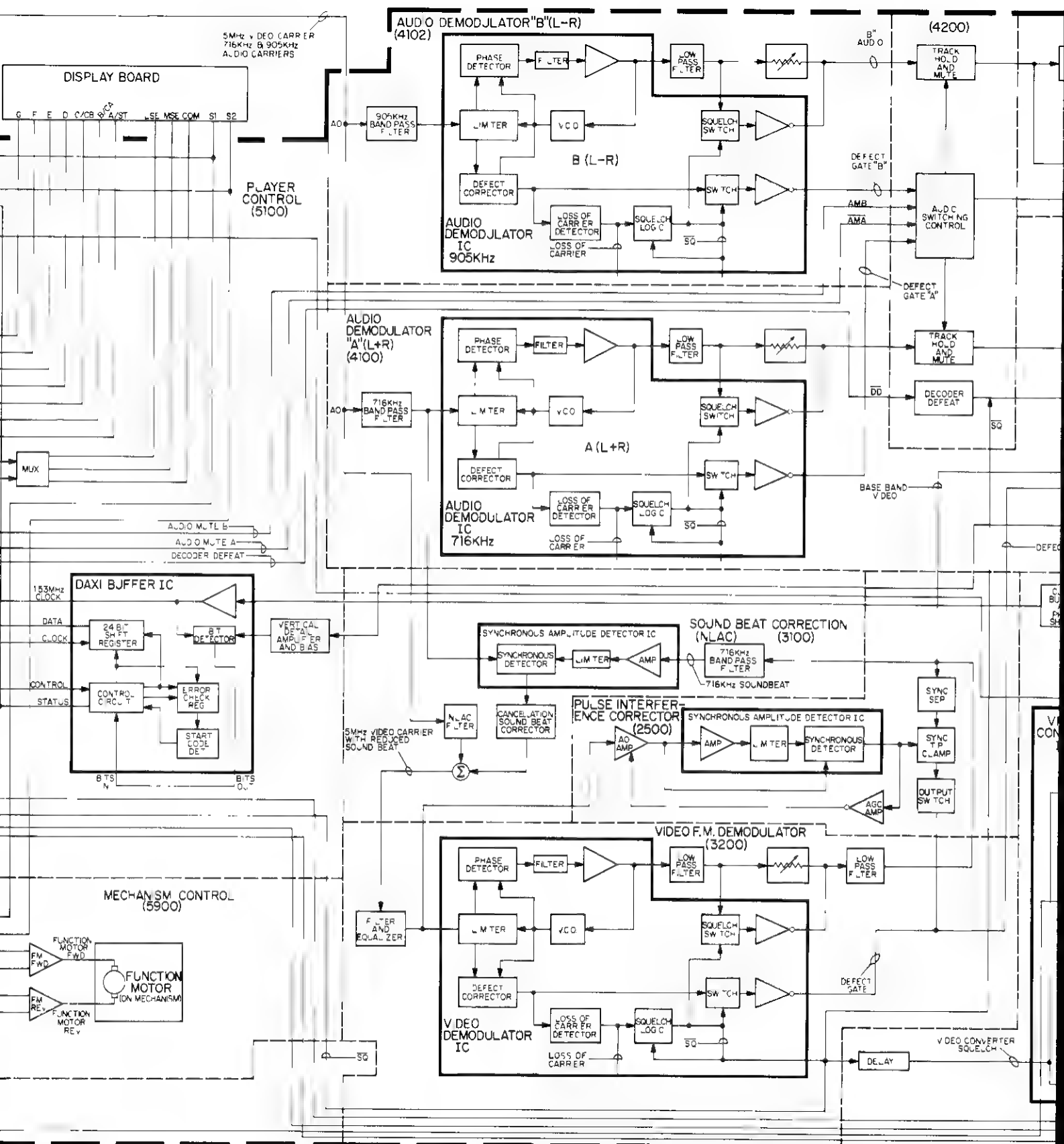
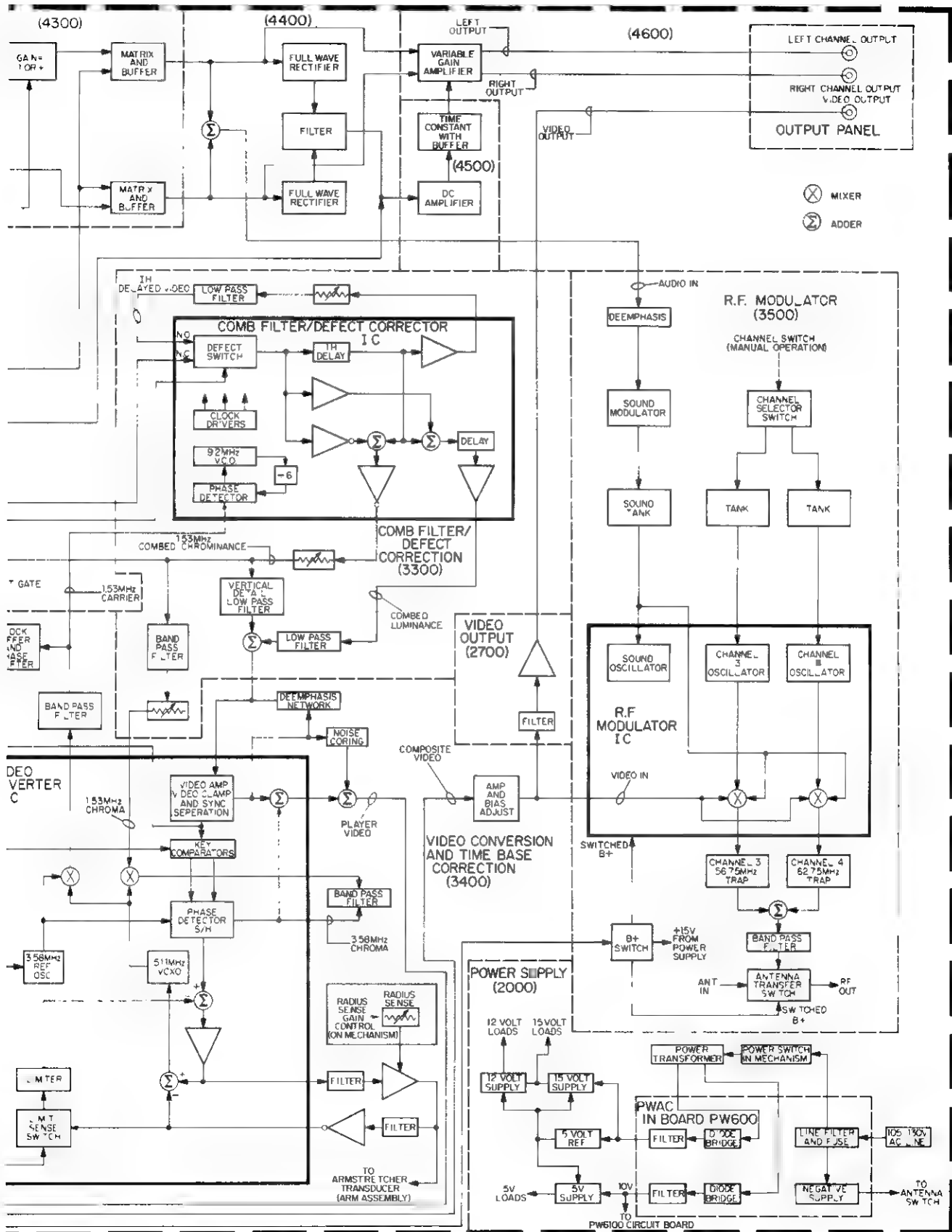
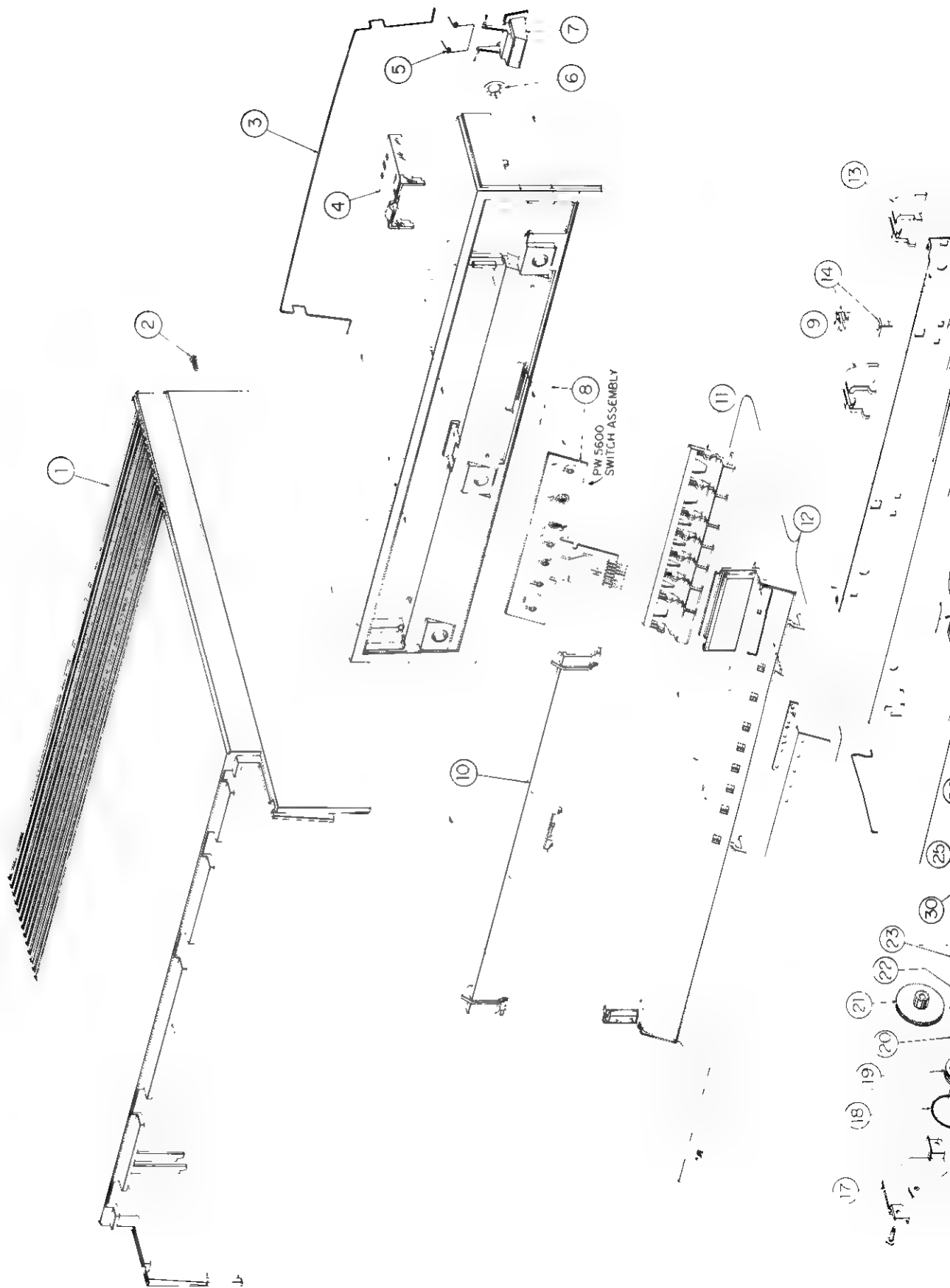


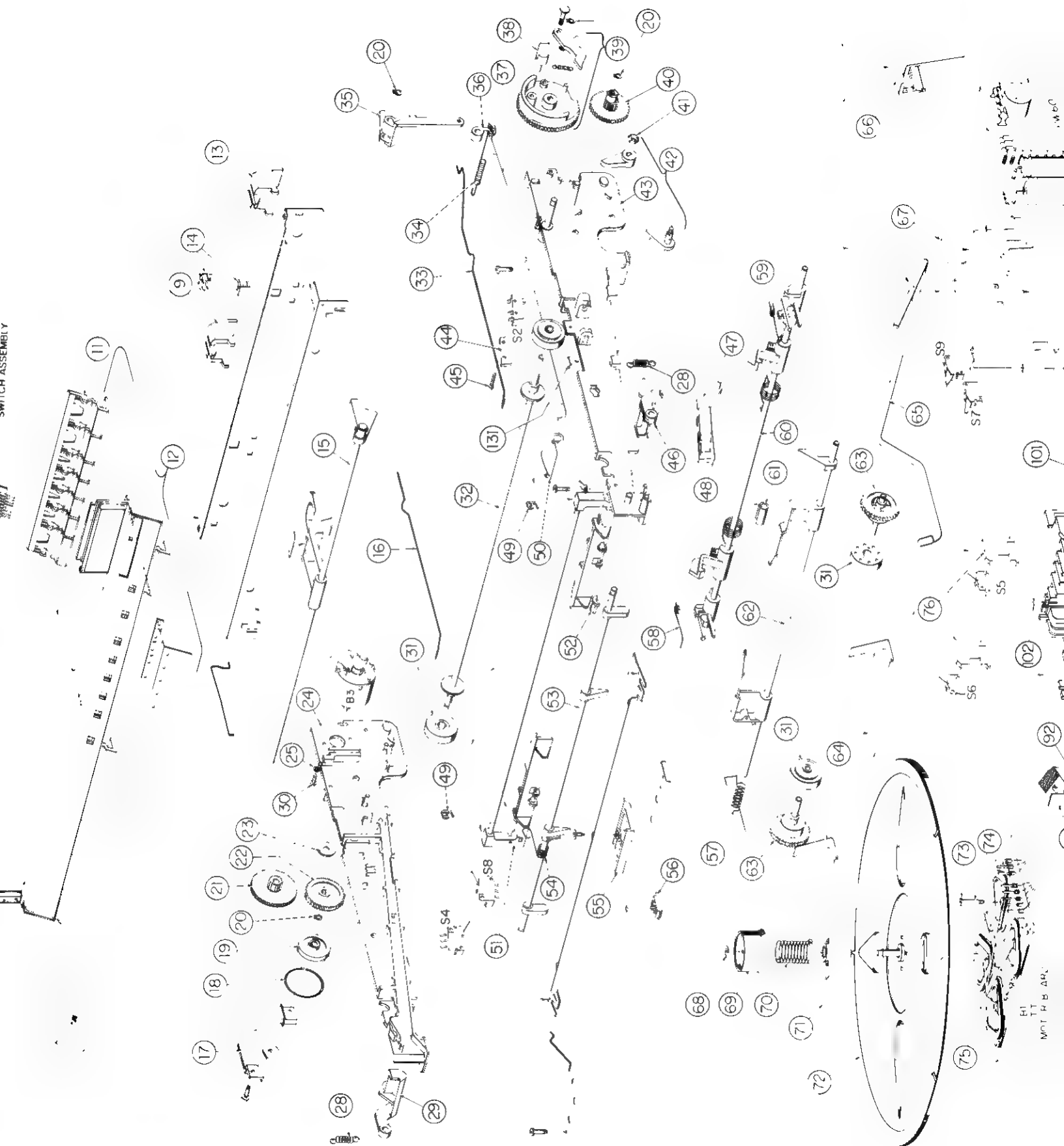
Fig 46—Functional Block Diagram



EXPLODED VIEW



SWITCH ASSEMBLY



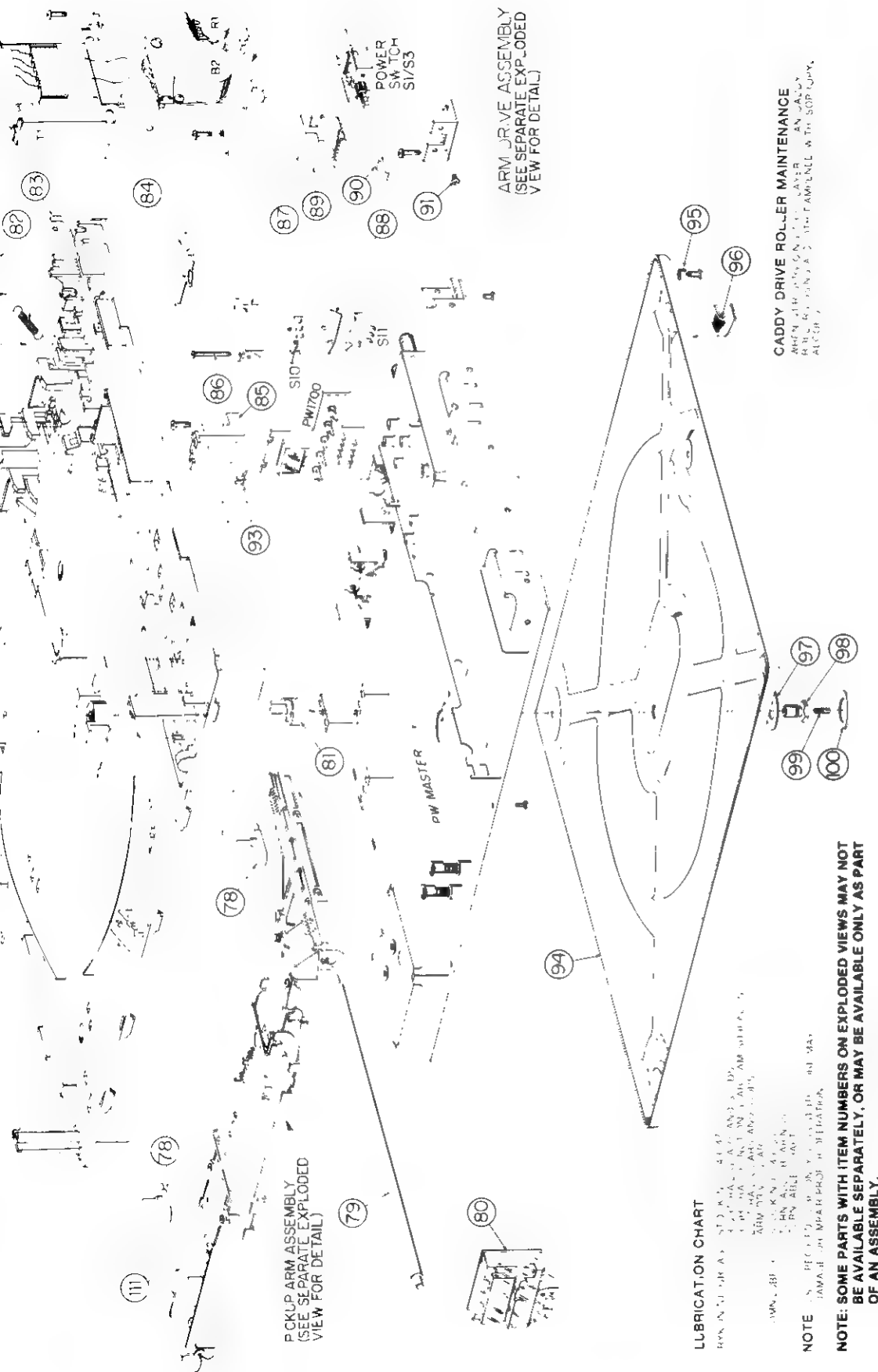


Fig. 47—Cabinet and Player Mechanism

EXPLODED VIEW

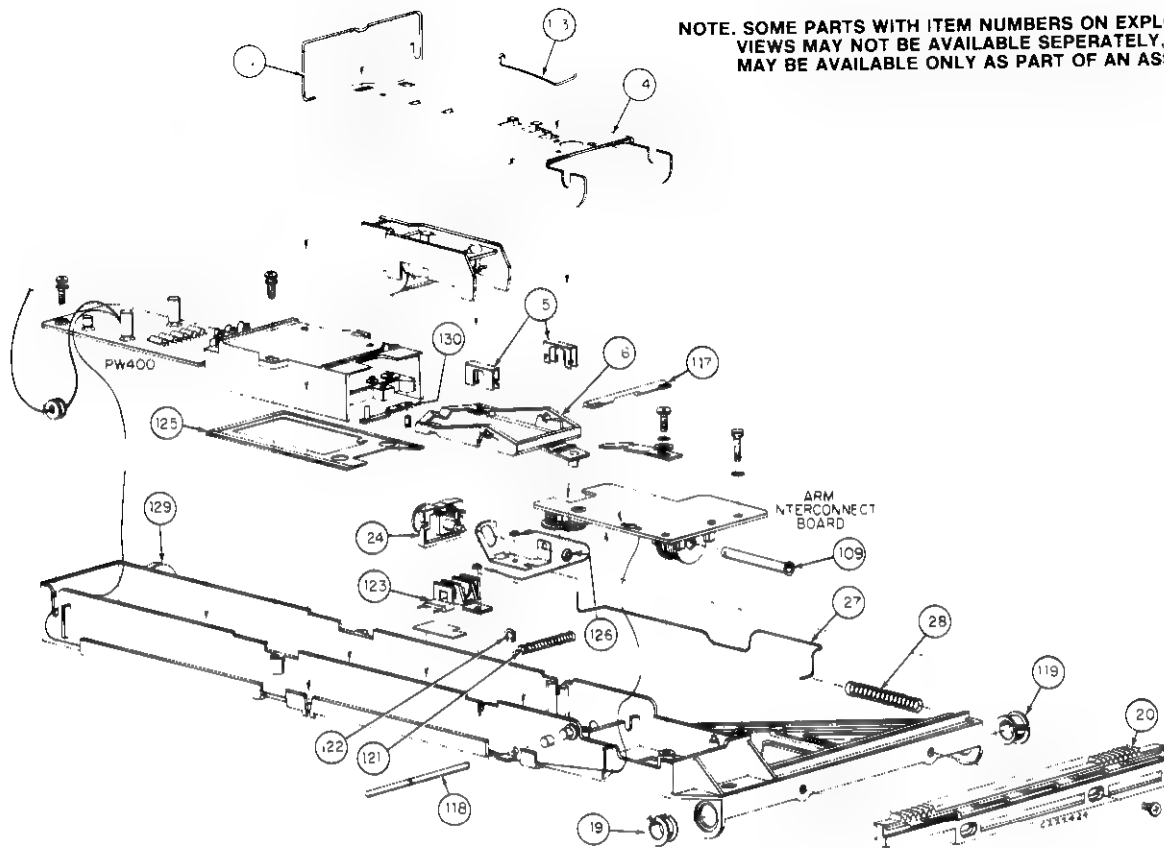


Fig. 48—Arm Assembly

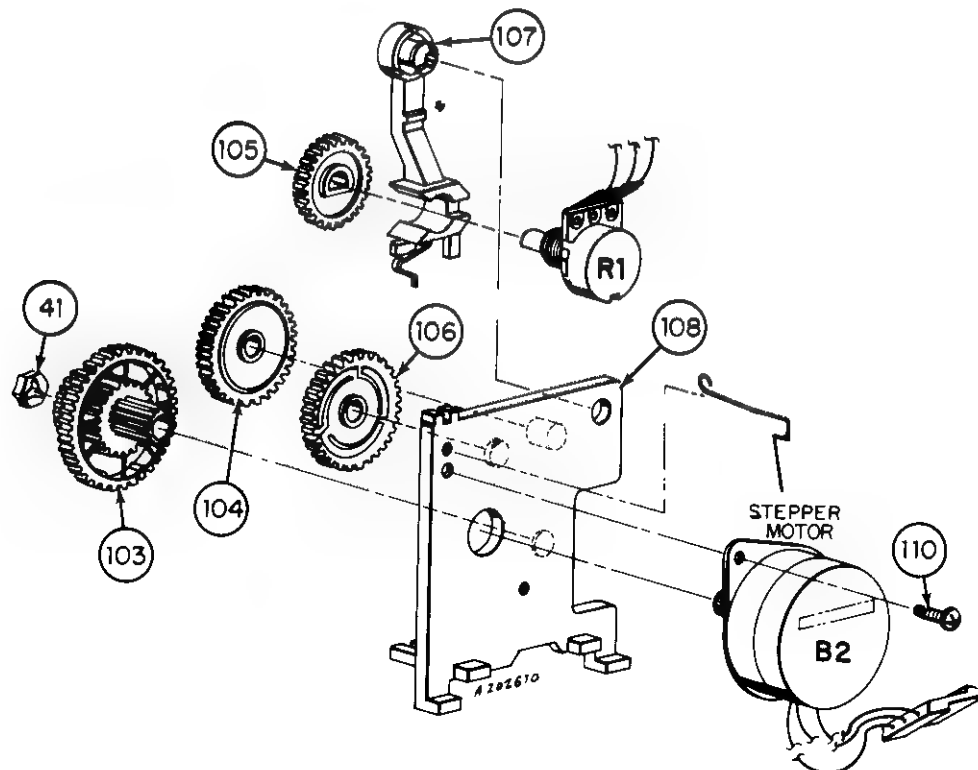


Fig. 49—Arm Drive Assembly



All integrated circuits and many other semiconductors are electrostatically sensitive and therefore require the special handling techniques described under 'Electrostatically Sensitive (ES) Devices' in the *Servicing Precautions* section of basic service data.

STAR or SHADING (*) See PRODUCT SAFETY NOTICE on page 2 of this Service Data.

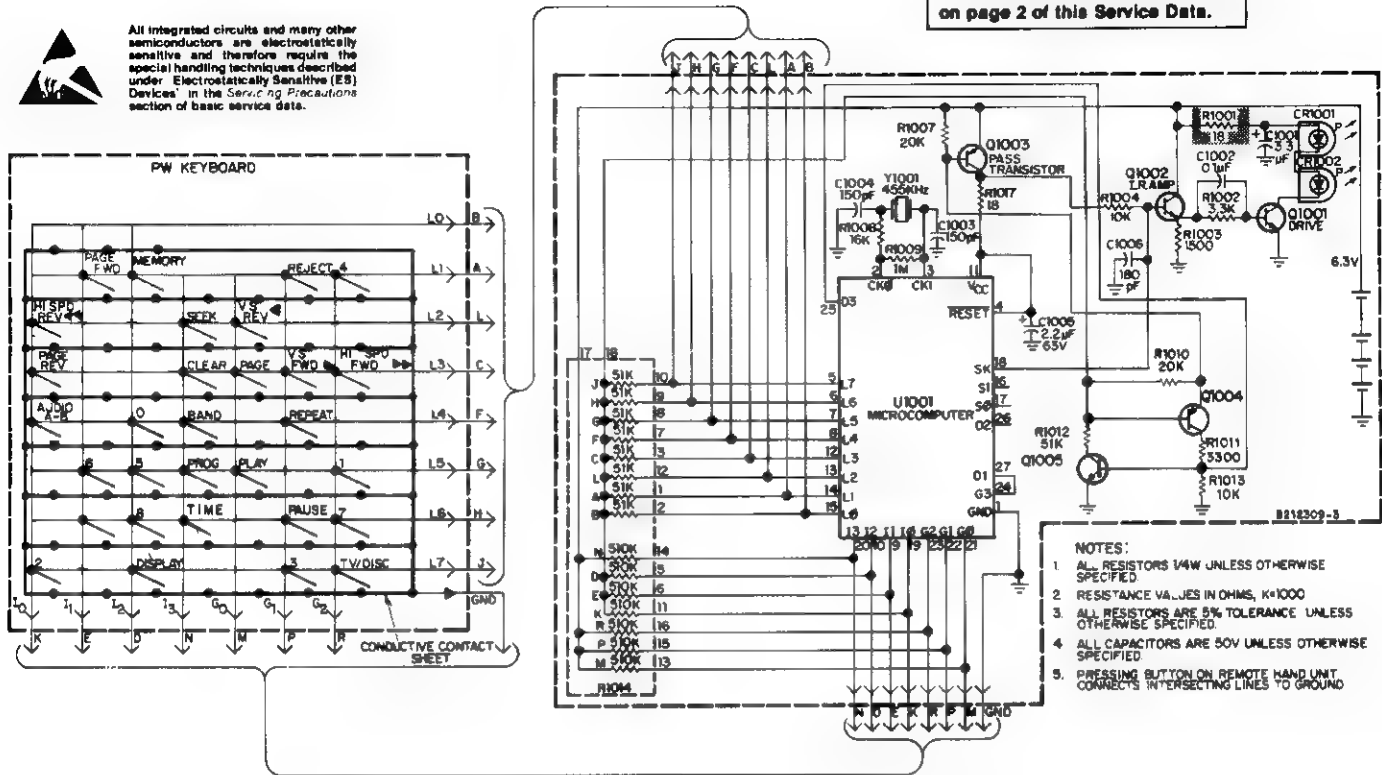


Fig. 50—CRK36 IR Remote Transmitter Schematic

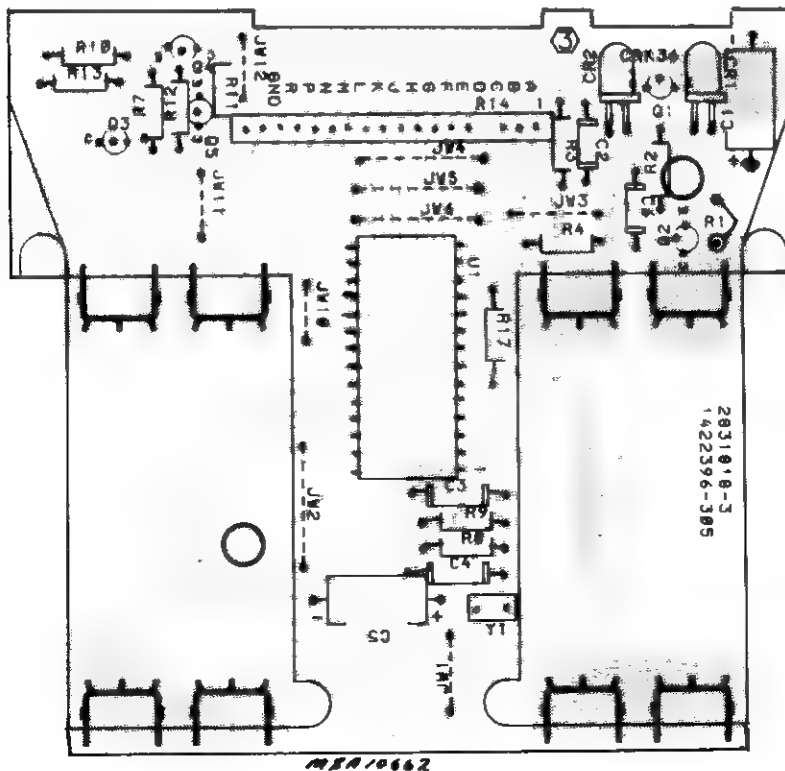


Fig. 51—PW 1000 Circuit Board



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REPLACEMENT PARTS

BEFORE REPLACING PARTS READ THE FOLLOWING

RCA-Approved Substitute Stock Numbers Before ordering a replacement part, check the RCA-Approved Substitute Stock Numbers in the RCA-Approved Substitute Stock Numbers List. This will help you to find the correct part for your set.

See your RCA Distributor for Replacement Parts and Accessories

Warranty Status of Assemblies and Parts The warranty status of some assemblies and parts is indicated by one of the following Warranty Status

• **Warranty Status of Assemblies and Parts** The warranty status of some assemblies and parts is indicated by one of the following Warranty Status

Assemblies listed without a Warranty Status Code symbol are eligible for warranty replacement as is their replacement parts.

Warranty replacement of cabinet parts requires prior approval of RCA.

Warranty Status and Specifications of assemblies and parts are subject to change without notice.

PRODUCT SAFETY NOTE Components marked with a ★ have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** in the Basic Service Data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a ★, replacement of RCA assemblies with other assemblies not RCA approved may result in a safety hazard.

Canada Stock Numbers:
Add prefix 62 to all stock numbers

.....AVOID REPLACEMENT PART ERRORS.....

File supplements and addendums immediately upon receipt, and consult the parts lists in them before ordering parts.

NOTE The parts listed in this list are for use in the SJT 400. The parts listed in this list are for use in the SJT 400. The parts listed in this list are for use in the SJT 400.

● **Basic Service Data**—Chassis and tuning systems and most related parts and assemblies that do not differ from one mode or mode group to another.

● **Service Data Supplements**—Cabinet, auxiliary, and other parts and assemblies that differ from one mode group to another.

● **Service Data Addendum**—Any parts additions, deletions, or other changes made after initial production.

Do not replace or order parts without first consulting any Addendum(s) that may have been issued since publication of this service data.

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
------------	-----------	-------------	-------------

SJT400

ELECTRICAL ASSEMBLIES & COMPONENTS

57928	2812587-501	● C RCU T AC INPUT PW600
157926	2816408-502	● C RCU T ARM INTERCONNECT
158005	2816404-501	● C RCU T DISPLAY
159570	2816406-501	● C RCU T FEATURES PW6100
157924	2812585-501	● C RCU T P CKUP PREAMP PW400
155878	2812595-502	± C RCU T RESONATOR

ELECTRICAL COMPONENTS

B1	156528	2816407-504	± MOTOR TURNABLE DRIVE INC. CBA
B2	154243	2872666-021	MOTOR ARM DRIVE
B3	155879	2816456-504	MOTOR FUNCTION DRIVE
BPF3101	157184	2861041-001	FILTER BAND-PASS
BPF4101	157184	2861041-001	FILTER BAND-PASS
BPF4102	157183	2861041-002	FILTER BAND-PASS
C1	145896	1491415-50R	CAPCD 4700PF M 50V
C401	143881	2841254-41M	CAPCD 2200PF M Z5P 50V
C402	147971	2841255-31M	CAPCD .01UF M Z5T 50V
C403	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C404	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C405	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C406	146365	2841273-552	CAP LYTC 4.7UF N 35V
C407	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C408	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C409	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C410	148057	2841253-92M	CAPCD 1000PF K Z5P 50V
C411	157931	2870697-110	* CAPCD 600PF M Z5T 1400V
C412	157931	2870697-110	* CAPCD 600PF M Z5T 1400V
C413	157430	2841255-61N	CAPCD .015UF M Z5T 50V
C414	157430	2841255-61N	CAPCD .015UF M Z5T 50V
C415	157430	2841255-61N	CAPCD .015UF M Z5T 50V
C416	153654	1490303 451	CAP LYTC 3300UF R 35V
C417	149152	1490303 341	CAP LYTC 2200UF R 25V
C418	146216	2840363 342	CAP LYTC 220UF 25V
C419	112969	1490939-703	CAPCD .1UF Z Y5T 50V
C420	153176	2871335 016	CAP POLY .33UF M 100V
C421	134939	2841255 50R	CAPCD .047UF Z Z5V 50V
C422	147036	2840395 30N	CAPCT .010UF M Z5R 50V
C423	147411	2841255 31M	CAPCD .01UF M Z5P 50V
C424	147411	2841255 31M	CAPCD .01UF M Z5P 50V
C425	147411	2841255 31M	CAPCD .01UF M Z5P 50V
C426	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C427	147411	2841255 50R	CAPCD .047UF Z Z5V 50V
C428	141868	2841273 163	CAP LYTC 1UF M 85C 50V
C429	146205	2841274 353	CAP LYTC 22UF M 35V
C430	146418	2841252 93A	CAPCD 180PF J NPO 50V
C431	147411	2841255 31M	CAPCD .01UF M Z5P 50V
C432	147411	2841255 31M	CAPCD .01UF M Z5P 50V

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C2513	149189	993286-153	CAP POLY .15UF J 100V
C2514	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2515	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2516	148407	2841250-67A	CAPCD 33PF D NPO 50V
C2517	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C2701	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2702	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2703	143866	2841251-83A	CAPCD 27PF J NPO 50V
C2705	143752	2840363-531	CAP LYTC 470UF R 16V
C3102	153576	2841253-53H	CAPCD 470PF J N750 50V
C3103	135452	2841253-13H	CAPCD 220PF J N750 50V
C3104	149164	2872860-113	CAP POLY .01UF K 50V
C3105	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3106	143874	2841252-83H	CAPCD 150PF J N750 50V
C3107	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3108	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3109	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3110	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3111	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V
C3112	147971	2841255-31M	CAPCD .01UF M Z5P 50V
C3117	146256	2841274-143	CAP LYTC 10UF M 25V
C3118	146256	2841274-143	CAP LYTC 10UF M 25V
C3119	143871	2841252-63H	CAPCD 100PF J N750 50V
C3120	145434	2841252-53H	CAPCD 82PF J N750 50V
C3121	146833	2841251-93H	CAPCD 33PF J N750 50V
C3122	146256	2841274-143	CAP LYTC 10UF M 25V
C3123	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3124	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3125	146256	2841274-143	CAP LYTC 10UF M 25V
C3201	143871	2841252-63H	CAPCD 100PF J N750 50V
C3202	146833	2841251-93H	CAPCD 33PF J N750 50V
C3203	143874	2841252-83H	CAPCD 150PF J N750 50V
C3204	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3205	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3206	143867	2841252 23A	CAPCD 47PF J NPO 50V
C3207	146768	2841251-53A	CAPCD 15PF J NPO 50V
C3208	135452	2841253-13H	CAPCD 220PF J N750 50V
C3209	146249	2841251 63A	CAPCD 18PF J NPO 50V
C3210	134939	2841255-50R	CAPCD .047UF Z Z5V 50V
C3211	143879	2841253 91M	CAPCD 1000PF M Z5P 50V
C3212	146249	2841251-63A	CAPCD 18PF J NPO 50V
C3213	146249	2841251 63A	CAPCD 18PF J NPO 50V
C3214	146833	2841251-93H	CAPCD 33PF J N750 50V
C3215	149196	2871417 001	CAP TRIM 40PF 250V
C3216	145434	2841252-53H	CAPCD 82PF J N750 50V
C3217	134939	2841255 50R	CAPCD .047UF Z Z5V 50V
C3218	149151	2841252-13A	CAPCD 39PF J N50 50V
C3219	149204	2841274-442	CAP LYTC 33UF M 85C 25V
C3221	157206	2841287-563	CAP LYTC 22UF M 50V
C3222	143871	2841252-63H	CAPCD 100PF J N750 50V
C3223	103245	2841251 43A	CAPCD 12PF J NPO 50V
C3224	146768	2841251 53A	CAPCD 15PF J NPO 50V
C3225	143871	2841252-63H	CAPCD 100PF J N750 50V
C3226	157205	2841250-82A	CAPCD 4.7PF K NPO 50V
C3227	143867	2841252 23A	CAPCD 47PF J NPO 50V
C3228	143879	2841253 91M	CAPCD 1000PF M Z5P 50V
C3229	157204	2841250-92A	CAPCD 5.6PF K NPO 50V
C3301	154336	2871335-083	CAP POLY .47UF K 100V
C3302	143967	2841254-81M	CAPCD 4700PF M Z5P 50V

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
C3303	148057	2840393-92M	CAPCT 1000PF K Z5P 50V	C4001	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3304	149161	2841274-243	CAP LYTC 15UF M 85C 25V	C4002	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3307	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4003	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3308	153925	2872860-125	CAP POLY 0.1UF K 50V	C4004	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3309	146418	2841252-93A	CAPCD 180PF J NPO 50V	C4107	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3310	112969	1490939-703	CAPCD 1UF Z Y5T 50V	C4108	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3311	143874	2841252-83H	CAPCD 150PF J N750 50V	C4109	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3312	135452	2841253-13H	CAPCD 220PF J N750 50V	C4110	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3313	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V	C4111	149188	2871335-129	CAP POLY 015UF J 100V
C3314	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4112	149163	2872860-217	CAP POLY 022UF J 50V
C3315	143874	2841252-83H	CAPCD 150PF J N750 50V	C4113	149188	2872860-215	CAP POLY 015UF J 50V
C3316	147036	2840395-30N	CAPCT 010UF M Z5R 50V	C4114	149163	2872860-217	CAP POLY 022UF J 50V
C3317	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V	C4117	146536	2841273-362	CAP LYTC 2.2UF N 85C 50V
C3318	147635	2841262-005	CAPCD 130PF J NPO 50V	C4118	146536	2841273-362	CAP LYTC 2.2UF N 85C 50V
C3319	135452	2841253-13H	CAPCD 220PF J N750 50V	C4119	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3320	157211	2872860-205	CAP POLY 0022UF J 50V	C4120	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3321	146210	2841273-553	CAP LYTC 4.7UF M 85C 50V	C4121	153576	2841253-53H	CAPCD 470PF J N750 50V
C3322	148057	2840393-92M	CAPCT 1000PF K Z5P 50V	C4122	157197	2841253-41H	CAPCD 390PF M N750 50V
C3323	146418	2841252-93A	CAPCD 180PF J NPO 50V	C4125	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3324	149147	2841262-006	CAPCD 300PF J N750 50V	C4126	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3325	146418	2841252-93A	CAPCD 180PF J NPO 50V	C4127	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3326	143874	2841252-83H	CAPCD 150PF J N750 50V	C4128	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3327	149203	2841275-143	CAP LYTC 100UF M 85C 25V	C4129	146256	2841274-143	CAP LYTC 10UF M 25V
C3328	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4130	146256	2841274-143	CAP LYTC 10UF M 25V
C3329	146256	2841274-143	CAP LYTC 10UF M 25V	C4201	143867	2841252-23A	CAPCD 47PF J NPO 50V
C3330	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4202	143867	2841252-23A	CAPCD 47PF J NPO 50V
C3331	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4203	153925	2872860-125	CAP POLY 0.1UF K 50V
C3333	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4204	139444	2871335-075	CAP POLY 0.1UF K 100V
C3335	146418	2841252-93A	CAPCD 180PF J NPO 50V	C4205	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3336	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4206	143967	2841254-81M	CAPCD 4700PF M Z5P 50V
C3401	135452	2841253-13H	CAPCD 220PF J N750 50V	C4207	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C3402	145741	2841254-41N	CAPCD 2200PF M Z5T 50V	C4301	112969	1490939-703	CAPCD 1UF Z Y5T 50V
C3403	149163	2872860-017	CAP POLY 022UF M 50V	C4302	146256	2841274-143	CAP LYTC 10UF M 25V
C3404	145434	2841252-53H	CAPCD 82PF J N750 50V	C4401	154354	2841288-164	CAP LYTC 33UF K 50V
C3405	157215	2840394-22N	CAPCT 1500PF K Z5R 50V	C4402	154354	2841288-164	CAP LYTC 33UF K 50V
C3406	142329	1490301-141	CAP LYTC 10UF R 25V	C4403	146256	2841274-143	CAP LYTC 10UF M 25V
C3407	147036	2840395-30N	CAPCT 010UF M Z5R 50V	C4404	146256	2841274-143	CAP LYTC 10UF M 25V
C3408	146254	2841262-004	CAPCD 91PF J NPO 50V	C4501	146256	2841274-143	CAP LYTC 10UF M 25V
C3409	157204	2841250-92A	CAPCD 5.6PF NPO K 50V	C4502	154354	2841288-164	CAP LYTC 10UF M 25V
C3410	142329	1490301-141	CAP LYTC 10UF R 25V	C4601	146256	2841274-143	CAP LYTC 10UF M 25V
C3411	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C4602	146256	2841274-143	CAP LYTC 10UF M 25V
C3412	157203	2841262-016	CAPCD 36PF J NPO 50V	C4603	143882	2841254-21M	CAPCD 1500PF M Z5P 50V
C3413	149146	2841262-008	CAPCD 200PF J NPO 50V	C4604	143882	2841254-21M	CAPCD 1500PF M Z5P 50V
C3414	145676	2841252-43A	CAPCD 68PF J NPO 50V	C4605	146256	2841274-143	CAP LYTC 10UF M 25V
C3415	157203	2841262-016	CAPCD 36PF J NPO 50V	C4606	146256	2841274-143	CAP LYTC 10UF M 25V
C3416	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C4607	145741	2841254-41N	CAPCD 2200PF M Z5T 50V
C3417	157210	2872860-101	CAP POLY 001UF K 50V	C4608	145741	2841254-41N	CAPCD 2200PF M Z5T 50V
C3418	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C5101	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C3419	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5102	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3420	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5103	157199	2841251-73A	CAPCD 22PF J NPO 50V
C3421	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C5104	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3422	143866	2841251-83A	CAPCD 27PF J NPO 50V	C5105	146256	2841274-143	CAP LYTC 10UF M 25V
C3423	135452	2841253-13H	CAPCD 220PF J N750 50V	C5106	149204	2841274-442	CAP LYTC 33UF N 85C 25V
C3424	157216	2871335-161	CAP POLY 33UF J 100V	C5107	157207	2872860-023	CAP POLY 067UF M 50V
C3425	148057	2840393-92M	CAPCT 1000PF K Z5P 50V	C5108	141868	2841273-163	CAP LYTC 1UF M 85C 50V
C3426	149188	2871335-129	CAP POLY 015UF J 100V	C5109	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3427	157209	2871335-157	CAP POLY 22UF J 100V	C5110	149203	2841275-143	CAP LYTC 100UF M 85C 25V
C3428	157208	2871335-151	CAP POLY 12UF J 100V	C5111	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3431	147036	2840395-30N	CAPCT 010UF M Z5R 50V	C5112	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3432	142329	1490301-141	CAP LYTC 10UF R 25V	C5113	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3433	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C5114	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3434	134939	2841255-50R	CAPCD 047UF Z Z5V 50V	C5115	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3435	148523	2840392-83J	CAPCT 150PF J NPO 50V	C5116	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3436	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5117	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3437	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5119	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3501	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5120	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3502	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5121	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3503	143885	2841262-010	CAPCD 110PF J NPO 50V	C5122	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3504	146254	2841262-004	CAPCD 91PF J NPO 50V	C5123	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3505	147036	2840395-30N	CAPCT 010UF M Z5R 50V	C5124	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3510	143866	2841251-83A	CAPCD 27PF J NPO 50V	C5125	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3511	143867	2841252-23A	CAPCD 47PF J NPO 50V	C5126	147971	2841255-31M	CAPCD 01UF M Z5P 50V
C3512	157200	2841262-019	CAPCD 62PF J NPO 50V	C5127	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3513	146833	2841251-93H	CAPCD 33PF J N750 50V	C5128	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3514	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5129	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3515	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5130	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3516	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5301	159640	2872860-225	CAP POLY 0.1UF J 50V
C3517	145741	2841254-41N	CAPCD 2200PF M Z5T 50V	C5302	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3518	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5303	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3519	143871	2841252-63D	CAPCD 100PF J N150 50V	C5304	149204	2841274-442	CAP LYTC 33UF N 25V
C3520	157199	2841251-73A	CAPCD 22PF J NPO 50V	C5901	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3521	145741	2841254-41N	CAPCD 2200PF M Z5T 50V	C5902	132174	1474578-007	CAP TRIM 1PF NPO 500V
C3522	147971	2841255-31M	CAPCD 01UF M Z5P 50V	C5903	146768	2841251-53A	CAPCD 15PF J NPO 50V
C3523	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5904	145676	2841252-43A	CAPCD 68PF J NPO 50V
C3524	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5905	146768	2841251-53A	CAPCD 15PF J NPO 50V
C3525	143866	2841251-83A	CAPCD 27PF J NPO 50V	C5906	134939	2841255-50R	CAPCD 047UF Z Z5V 50V
C3526	153575	2841253-93J	CAPCD 1000PF J SL 50V	C5907	143879	2841253-91M	CAPCD 1000PF M Z5P 50V
C3527	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5908	147036	2840395-30N	CAPCT 010UF M Z5R 50V
C3528	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5909	147036	2840395-30N	CAPCT 010UF M Z5R 50V
C3530	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5910	146256	2841274-143	CAP LYTC 10UF M 25V
C3532	143879	2841253-91M	CAPCD 1000PF M Z5P 50V	C5911	147971	2841255-31M	CAPCD 01UF M Z5P 50V

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Replacement Parts Continued (See Product Safety Note on first page of this parts list)

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Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
F601	156261	2840454-506	* FUSE 0 6A	Q2002	145776	1417303-003	TRANSISTOR CURRENT L MITER
HE1	157638	2816248-001	TRANSISTOR HALL EFFECT	Q2003	146847	1417306-013	TRANSISTOR DRIVER
HE2	157638	2816248-001	TRANSISTOR HALL EFFECT	Q2004	145395	1417318-007	TRANSISTOR REGULATOR
J4	149208	1466404-001	CONNECTOR	Q2005	140979	1417364-001	TRANSISTOR REGULATOR
J6	149208	1466404-001	CONNECTOR	Q2006	146847	1417306-013	TRANSISTOR CURRENT LIMITER
J11	158021	2861623-004	CONNECTOR	Q2007	146847	1417306-013	TRANSISTOR CURRENT LIMITER
J101	158697	2873321-001	CONNECTOR 8 P-IN	Q2501	146847	1417306-013	TRANSISTOR RF AMP
J2701	157182	2816401-504	JACK VIDEO W BRACKET	Q2502	146847	1417306-013	TRANSISTOR OUTPUT DET SW
J4601	157181	2816401-503	JACK AUDIO W BRACKET	Q2503	146847	1417306-013	TRANSISTOR OUTPUT DET SW
J4602	157189	2816401-503	JACK AUDIO W BRACKET	Q2504	150247	1417411-003	TRANSISTOR GAIN CONTROL
J6101	159575	2873400-104	CONNECTOR 4 PIN	Q2505	145776	1417303-003	TRANSISTOR AGC AMP
J6102	149208	1466404-001	CONNECTOR	Q2506	145776	1417303-003	TRANSISTOR SYNC STRIPPER
J6106	149208	1466404-001	CONNECTOR	Q2507	146847	1417306-013	TRANSISTOR CLAMP
J6107	149208	1466404-001	CONNECTOR	Q2701	146847	1417306-013	TRANSISTOR VIDEO DRIVER
J6109	159576	2873386-008	CONNECTOR 8 PIN	Q3101	146847	1417306-013	TRANSISTOR N-LAC BUFFER
L101	158695	2861409-001	COIL	Q3102	149040	1417387-001	TRANSISTOR N-LAC AMP
L102	157938	2812595-506	COIL ARM STRETCHER	Q3103	146847	1417306-013	TRANSISTOR N-LAC AMP
L103	157936	2831713-001	COIL SKIPPER	Q3104	146847	1417306-013	TRANSISTOR N-LAC OUT DRIVER
L104	157934	2861415-001	COIL SWEEPER	Q3105	146847	1417306-013	TRANSISTOR 716KHZ AMP
L801	157929	2873085-001	* COIL LINE CHOKE	Q3107	146847	1417306-013	TRANSISTOR CONTROL AMP
L2701	153921	2841228-219	COIL 33UH	Q3201	146847	1417306-013	TRANSISTOR PHASE CORRECTION
L3105	149171	2841228-234	COIL 560UH	Q3202	146847	1417306-013	TRANSISTOR VIDEO BUFFER
L3201	149173	2841228-221	COIL 47UH	Q3301	146847	1417306-013	TRANSISTOR DELAY VIDEO DRIVE
L3202	154050	2841228-220	COIL 39UH	Q3303	146847	1417306-013	TRANSISTOR VERT DETAIL
L3203	149170	2841228-112	COIL 8 2UH	Q3304	146847	1417306-013	TRANSISTOR CHROMA DRIVER
L3204	149171	2841228-234	COIL 560UH	Q3305	145776	1417303-003	TRANSISTOR CHROMA BUFFER
L3205	149173	2841228-221	COIL 47UH	Q3306	146847	1417306-013	TRANSISTOR LUMA BUFFER
L3206	149176	2841228-217	COIL 22UH	Q3401	146847	1417306-013	TRANSISTOR VIDEO BUFFER
L3207	149173	2841228-221	COIL 47UH	Q3402	146847	1417306-013	TRANSISTOR VIDEO AMP
L3208	149175	2841228-214	COIL 12UH	Q3403	146847	1417306-013	TRANSISTOR C-LK PHASE SHIFTER
L3301	149167	2841228-223	COIL 68UH	Q3404	146847	1417306-013	TRANSISTOR CLOCK BUFFER
L3302	149167	2841228-223	COIL 68UH	Q3405	146847	1417306-013	TRANSISTOR XDCR DRIVER
L3303	149176	2841228-217	COIL 22UH	Q3406	149041	1417351-002	TRANSISTOR XDCR DRIVER
L3304	149168	2841228-224	COIL 82UH	Q3407	146847	1417306-013	TRANSISTOR XDCR DRIVER
L3305	149176	2841228-217	COIL 22UH	Q3408	149041	1417351-002	TRANSISTOR XDCR DRIVER
L3306	149176	2841228-217	COIL 22UH	Q3409	146847	1417306-013	TRANSISTOR XDCR DRIVER
L3401	149177	2841271-001	COIL 36UH	Q3412	151326	1417360-001	TRANSISTOR XDCR DRIVER
L3402	157189	1467370-005	COIL 62UH	Q3413	146847	1417306-013	TRANSISTOR VIDEO BLANKER
L3403	157190	1467370-006	COIL 20UH	Q3501	149040	1417387-001	TRANSISTOR NOISE CORING AMP
L3404	149176	2841228-217	COIL 22UH	Q4102	146847	1417306-013	TRANSISTOR NOISE CORING AMP
L3405	149175	2841228-214	COIL 12UH	Q4301	146847	1417306-013	TRANSISTOR BIAS SWITCH
L3501	157191	2873326-002	COIL .069UH	Q4302	146847	1417306-013	TRANSISTOR DECODER DEFEAT
L3502	157191	2873326-002	COIL .069UH	Q4303	146847	1417306-013	TRANSISTOR LEFT CH BUFFER
L3505	157194	2872884-002	COIL 0.22UH	Q4501	149040	1417387-001	TRANSISTOR RIGHT CH BUFFER
L3506	157193	2873326-016	COIL 235UH	Q5101	145776	1417303-003	TRANSISTOR CURRENT SOURCE
L3507	157193	2873326-016	COIL 235UH	Q5102	145776	1417303-003	TRANSISTOR LS DIGIT DRIVER
L3508	157194	2872884-002	COIL 0.22UH	Q5103	146847	1417306-013	TRANSISTOR MS DIGIT DRIVER
L3509	157188	1467370-001	COIL 10UH	Q5114	145776	1417303-003	TRANSISTOR DAXI STATUS INVERTER
L3511	157195	1496280-003	COIL 33UH	Q5104	145395	1417318-007	TRANSISTOR STEPPER OUTPUT
L4107	153920	2843031-001	COIL 18MH	Q5105	146847	1417306-013	TRANSISTOR STEPPER DRIVER
L4108	153920	2843031-001	COIL 18MH	Q5106	149041	1417351-002	TRANSISTOR STEPPER OUTPUT A
L5101	157187	2872884-017	COIL 5 6UH	Q5107	145395	1417318-007	TRANSISTOR STEPPER OUTPUT B
L5901	157187	2872884-017	COIL 5 6UH	Q5108	146847	1417306-013	TRANSISTOR LIFTER DRIVE
L6101	159579	2871333-007	COIL OSD 1MHZ ADJ	Q5109	149041	1417351-002	TRANSISTOR LIFTER OUTPUT
L6102	149195	1467370-003	COIL OSD 6MHZ ADJ	Q5110	146847	1417306-013	TRANSISTOR VERT DETAIL DRIVE
L6103	159577	2873601-146	COIL 270UH	Q5111	146847	1417306-013	TRANSISTOR STEPPER DRIVE C
L6104	159578	2873601-150	COIL 390UH	Q5112	149041	1417351-002	TRANSISTOR STEPPER OUTPUT C
P1	158674	2861623-109	CONNECTOR 9 PIN	Q5113	145776	1417303-003	TRANSISTOR LED DISPLAY SELECT
P2	158675	2861084-204	CONNECTOR 4 P-IN	Q5114	145776	1417303-003	TRANSISTOR DISCRETE LED SELECT
P3	158020	2861623-011	CONNECTOR 11 PIN	Q5115	146847	1417306-013	TRANSISTOR LOW VOLTAGE DET
P4	158673	2861084-102	CONNECTOR 2 PIN	Q5116	146847	1417306-013	TRANSISTOR RESET SWITCH
P5	158676	2861084-105	CONNECTOR 5 PIN	Q5301	146847	1417306-013	TRANSISTOR REV RAMP SWITCH
P6	158673	2861084-102	CONNECTOR 2 PIN	Q5302	146847	1417306-013	TRANSISTOR FWD RAMP SWITCH
P7	149182	1477678-104	CONNECTOR 5 PIN	Q5303	146847	1417306-013	TRANSISTOR KICK PULSE DRIVER
P8	149182	1477678-104	CONNECTOR 2 PIN	Q5304	145776	1417303-003	TRANSISTOR KICK PULSE DRIVER
P9	158673	2861084-102	CONNECTOR 2 PIN	Q5305	159299	1417327-004	TRANSISTOR KICK PULSE OUTPUT
P11	158021	2861623-004	CONNECTOR 4 PIN	Q5306	159300	1417328-003	TRANSISTOR KICK PULSE OUTPUT
P12	149180	1477678-001	CONNECTOR 2 PIN	Q5901	159299	1417327-004	TRANSISTOR REV FUNCTION SW
P101	157525	1467740-071	CONNECTOR 8 PIN	Q5902	146847	1417306-013	TRANSISTOR FUNC DR REV
P1101	157524	2861623-107	CONNECTOR 7 PIN	Q5903	159299	1417327-004	TRANSISTOR FWD FUNCTION SW
P5601	157525	1467740-071	CONNECTOR 8 PIN	Q5904	146847	1417306-013	TRANSISTOR FUNC DR FWD
P6102	149180	1477678-001	CONNECTOR 2 PIN	Q5905	145395	1417318-007	TRANSISTOR FUNC MTR OUTPUT FWD
P6103	159639	2861623-008	CONNECTOR 8 PIN	Q5906	145395	1417318-007	TRANSISTOR FUNC MTR OUTPUT REV
P6104	149182	1477678-104	CONNECTOR 5 PIN	Q5907	145776	1417303-003	TRANSISTOR PAUSE LINE BUFFER
P6105	158019	2861623-010	CONNECTOR 10 PIN	Q5908	146847	1417306-013	TRANSISTOR SW DRIVER FWD
P6106	149180	1477678-001	CONNECTOR 2 PIN	Q5909	146847	1417306-013	TRANSISTOR SW DRIVER FWD
P6107	149180	1477678-001	CONNECTOR 2 PIN	Q5921	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW
P6109	157525	1467740-071	CONNECTOR 8 PIN	Q5922	146847	1417306-013	TRANSISTOR DRIVE AMP
Q101	145395	1417318-007	TRANSISTOR SWEEP	Q5923	159299	1417327-004	TRANSISTOR TURNABLE MOTOR DRIVER B
Q102	146847	1417306-013	TRANSISTOR INVERTER	Q5931	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW
Q401	151326	1417360-001	TRANSISTOR GAIN STAGE	Q5932	146847	1417306-013	TRANSISTOR DRIVE AMP
Q402	151326	1417360-001	TRANSISTOR OUTPUT DRIVER				
Q403	143794	1417306-012	TRANSISTOR AFT AMP				
Q404	143794	1417306-012	TRANSISTOR AFT REF AMP				
Q405	156262	1417382-002	TRANSISTOR SEARCH OSC				
Q2001	155882	1417422-001	TRANSISTOR REGULATOR				

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1983 SJT 400 REPLACEMENT PARTS

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO	STOCK NO	DRAWING NO	DESCRIPTION	SYMBOL NO	STOCK NO	DRAWING NO	DESCRIPTION
Q5933	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER A	R3443	829322	993218-729	RES CF 1.4W 2% 22K
Q5941	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW TCH	R3446	829022	993113-185	* RES MFFP 1.4W 5% 22R
Q5942	146847	1417306-013	TRANSISTOR DRIVE AMP	R3449	829033	993113-189	* RES MFFP 1.4W 5% 33R
Q5943	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER B	R3452	157340	2815583-469	RES CF 1.8W 5% 1M
Q5951	159300	1417328-003	TRANSISTOR CURRENT SOURCE SW	R3464	829110	993113-201	* RES MFFP 1.4W 5% 100R
Q5952	146847	1417306-013	TRANSISTOR DRIVE AMP	R3509	829068	993113-197	* RES MFFP 1.4W 5% 68R
Q5953	159299	1417327-004	TRANSISTOR TURNTABLE MOTOR DRIVER C	R3510	829068	993113-197	* RES MFFP 1.4W 5% 68R
Q6101	157631	1417383-001	TRANSISTOR ANT BUFFER SW	R3511	829310	993218-721	RES CF 1.4W 2% 10K
Q6102	146847	1417306-013	TRANSISTOR CAV BUS RCVR	R3515	829247	993218-713	RES CF 1.4W 2% 4700R
Q6103	146847	1417306-013	TRANSISTOR LOW VOLT DET	R3524	829130	993218-684	RES CF 1.4W 2% 300R
Q6104	146847	1417306-013	TRANSISTOR RESET SW	R3529	829239	993218-711	RES CF 1.4W 2% 3.9K
Q6105	146847	1417306-013	TRANSISTOR CAV BUFFER	R3531	829115	993218-677	RES CF 1.4W 2% 150R
Q6106	157632	1417386-001	TRANSISTOR PHASE DET DW	R3532	829010	993218-349	RES CF 1.4W 5% 10R
Q6107	149040	1417387-001	TRANSISTOR PHASE DET UP	R4111	151270	1479265-047	RES CONTROL 716KHZ VCO FREQ ADJ
Q6108	157632	1417386-001	TRANSISTOR PLAYER VIDEO SW	R4112	151270	1479265-047	RES CONTROL 905KHZ VCO FREQ ADJ
Q6109	157632	1417386-001	TRANSISTOR CHAR VIDEO SW	R4127	151371	1479265-049	RES CONTROL L + R LEVEL ADJ
Q6110	149040	1417387-001	TRANSISTOR CHAR VIDEO AMP	R4128	151371	1479265-049	RES CONTROL
Q6111	146847	1417306-013	TRANSISTOR CAV BUS DRVR	R4140	829010	993113-177	* RES MFFP 1.4W 5% 10R
Q6114	140076	1417309-001	TRANSISTOR R BUFFER AMP	R4141	829010	993113-177	* RES MFFP 1.4W 5% 10R
Q6115	146847	1417306-013	TRANSISTOR SYNC TIP BIAS AMP	R4203	829522	993218-477	RES CF 1.4W 5% 2.2M
Q6116	149040	1417387-001	TRANSISTOR BAS TRACKING	R4204	829522	993218-477	RES CF 1.4W 5% 2.2M
Q6117	146847	1417306-013	TRANSISTOR RKM BUFFER	R4205	829522	993218-477	RES CF 1.4W 5% 2.2M
R1	156333	2872667-003	RES CONTROL RAD JS SENSE	R4206	829522	993218-477	RES CF 1.4W 5% 2.2M
R401	153030	993113-203	* RES MFFP 1.4W 5% 120R	R4209	829239	993218-711	RES CF 1.4W 2% 3.9K
R411	829311	993218-722	RES CF 1.4W 2% 11K	R4210	829175	993218-694	RES CF 1.4W 2% 750R
R412	829222	993218-705	RES CF 1.4W 2% 2200R	R4213	157333	2815583-728	RES CF 1.8W 2% 20K
R414	829010	993218-349	RES CF 1.4W 5% 10R	R4214	829322	993218-729	RES CF 1.4W 2% 22K
R417	829022	993113-185	* RES MFFP 1.4W 5% 22R	R4303	151371	1479265-049	RES CONTROL
R601	502547	82283-106	RES CC 1/2W 10% 4.7M	R4305	829320	993218-728	RES CF 1.4W 2% 20K
R2002	830B56	993291-319	* RES MF 1/2W 5% 56R	R4306	157333	2815583-728	RES CF 1.8W 2% 20K
R2003	830B56	993291-319	* RES MF 1/2W 5% 56R	R4308	157333	2815583-728	RES CF 1.8W 2% 20K
R2005	829156	993113-219	* RES MFFP 1.4W 5% 560R	R4310	829522	993218-477	RES CF 1.4W 5% 2.2M
R2006	157214	990401-416	RES MF 1/4W 1% 14.3K	R4311	829320	993218-728	RES CF 1.4W 2% 20K
R2007	157213	990401-401	RES MF 1/4W 1% 10K	R4312	157333	2815583-728	RES CF 1.8W 2% 20K
R2008	157212	990401-430	RES MF 1/4W 1% 20K	R4317	157333	2815583-728	RES CF 1.8W 2% 20K
R2009	157213	990401-401	RES MF 1/4W 1% 10K	R4503	157333	2815583-728	RES CF 1.8W 2% 20K
R2010	829068	993113-197	* RES MFFP 1.4W 5% 68R	R4504	157338	2815583-708	RES CF 3K 2% 1.8W
R2013	830A68	993273-345	* RES CFFP 1.2W 5% 6.8R	R4505	157332	2815583-752	RES CF 1.8W 2% 200K
R2014	830033	993290-189	* RES MFFP 1.2W 5% 33R	R4506	157333	2815583-728	RES CF 1.8W 2% 20K
R2016	157336	2815583-721	RES CF 1.8W 2% 10K	R4507	157377	2815583-711	RES CF 1.8W 2% 3.9K
R2017	157334	2815583-724	RES CF 1.8W 2% 13K	R4508	829210	993218-697	RES CF 1.4W 2% 1K
R2019	829522	993218-477	RES CF 1.4W 5% 2.2M	R4509	157376	2815583-737	RES CF 1.8W 2% 47K
R2020	143848	1479265-013	RES CONTROL 5V REF	R4510	829147	993218-689	RES CF 1.4W 2% 470R
R2024	830A10	2817720-325	* RES CFFP 1.8W 5% 1R	R4615	829147	993218-689	RES CF 1.4W 2% 470R
R2025	829A27	993272-335	* RES CFFP 1.4W 5% 2.7R	R5126	829239	993218-711	RES CF 1.4W 2% 3.9K
R2504	829010	993113-177	* RES MFFP 1.4W 5% 10R	R5127	829047	993113-193	* RES MFFP 1.4W 5% 47R
R2516	157335	2815583-722	RES CF 1.8W 2% 11K	R5138	829010	993117-177	* RES MFFP 1.4W 5% 10R
R2704	829115	993113-205	* RES MFFP 1.4W 5% 150R	R5139	829010	993113-177	* RES MFFP 1.4W 5% 10R
R3101	829130	993218-684	RES CF 1.4W 2% 300R	R5156	829010	993218-349	* RES CF 1.4W 5% 10R
R3118	829010	993113-177	* RES MFFP 1.4W 5% 10R	R5157	829010	993218-349	RES CF 1.4W 5% 10R
R3129	829110	993113-201	* RES MFFP 1.4W 5% 100R	R5303	159641	2815583-731	RES CF 1.8W 2% 27K
R3131	151270	1479265-047	RES CONTROL DC BAL ADJ	R5304	159642	2815583-739	RES CF 1.8W 2% 56K
R3202	147615	1479265-020	RES CONTROL V DEO LEVEL ADJ	R5305	159643	2815583-725	RES CF 1.8W 2% 15K
R3213	829010	993113-177	* RES MFFP 1.4W 5% 10R	R5308	159644	2815583-745	RES CF 1.8W 2% 100K
R3221	157333	2815583-728	RES CF 1.8W 2% 20K	R5309	829010	993113-177	* RES MFFP 1.4W 5% 10R
R3222	157333	2815583-728	RES CF 1.8W 2% 20K	R5315	147040	993218-472	RES CF 1.4W 5% 1.3M
R3304	151270	1479265-047	RES CONTROL DELAY VIDEO ADJ	R5917	830022	993290-185	* RES MFFP 1.2W 5% 22R
R3312	146175	1479265-019	RES CONTROL CHROMA LEVEL ADJ	R5923	829110	993113-201	* RES MFFP 1.4W 5% 100R
R3315	829133	993218-685	RES CF 1.4W 2% 330R	R5926	830A10	2817720-325	* RES CFFP 1.8W 5% 1R
R3316	829133	993218-685	RES CF 1.4W 2% 330R	R5933	829110	993113-201	* RES MFFP 1.4W 5% 100R
R3317	146175	1479265-019	RES CONTROL VERT DETAIL LEVEL ADJ	R5936	830A10	2817720-325	* RES CFFP 1.2W 5% 1R
R3322	829133	993218-685	RES CF 1.4W 2% 330R	R5943	829110	993113-201	* RES MFFP 1.4W 5% 100R
R3323	829133	993218-685	RES CF 1.4W 2% 330R	R5946	830A10	2817720-325	* RES CFFP 1.2W 5% 1R
R3324	829133	993218-685	RES CF 1.4W 2% 330R	R5923	829110	993113-201	* RES MFFP 1.4W 5% 100R
R3325	830113	993290-204	* RES MFFP 1.2W 5% 130R	R5956	145384	993273-325	* RES CFFP 1.2W 5% 1.0R
R3326	829239	993218-711	RES CF 1.4W 2% 3.9K	R6169	151267	1479265-046	RES CONTROL SYNC TIP ADJ
R3327	829239	993218-711	RES CF 1.4W 2% 3.9K	S1	156527	2831429-004	* SW TCH POWER
R3328	143849	1479265-009	RES CONTROL LUMA CHANNEL ADJ	S2	157639	1495451-026	* SW TCH AC OFF
R3329	143849	1479265-009	RES CONTROL CHROMA CHANNEL ADJ	S3	156527	2831429-004	* SW TCH POWER
R3402	146175	1479265-019	RES CONTROL MOD DEPTH ADJ	S4	157519	2860855-001	SWITCH CADDY SENSE
R3404	157995	2815583-707	RES CF 1.8W 2% 2700R	S5	157519	2860855-001	SWITCH SPINE SENSE
R3407	157339	2815583-704	RES CF 1.8W 2% 2K	S6	157519	2860855-001	SWITCH SIDE ID
R3408	157994	2815583-715	RES CF 1.8W 2% 5.6K	S7	157519	2860855-001	SW TCH MECHAN SM PLAY
R3412	146175	1479265-019	RES CONTROL VC XD GAIN ADJ	S8	157519	2860855-001	SW TCH CADDY REVERSE
R3418	147960	993272-341	* RES CFFP 1.4W 5% 4.7R	S9	157518	2860855-004	SW TCH MECHAN SM LOAD
R3419	143848	1479265-013	RES CONTROL PHASE DET GAIN ADJ	S10	157519	2860855-001	SWITCH LANDING
R3424	157340	2815583-469	RES CF 1.8W 5% 1M	S11	157519	2860855-001	SWITCH ARM HOME
R3438	147040	993218-472	RES CF 1.4W 5% 1.3M	S3501	158002	2816401-502	SWITCH CHANNEL SELECT
R3441	147040	993218-472	RES CF 1.4W 5% 1.3M	S5601			
R3442	147040	993218-472	RES CF 1.4W 5% 1.3M	THRU			
				S5607	157861	2861083-001	SW TCH FJUNCT. ON MEMBRANE
				T1	156300	2816285-001	* TRANSFORMER POWER
				J2001	149018	1421754-001	IC REF AMP BUFFER ERROR AMP
				J2501	149019	1465648-001	IC SYNC DETECTOR

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SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
U3101	149019	1465648-001	IC SYNC DETECTOR	33	157581	2861038-001	ROD, FRT REC ACTIVATING
U3201	149036	1421760-001	IC VIDEO FM DEMODULATOR	34	157570	2844037-003	SPRING, EXT PAWL CAM
U3301	149039	1421752-001	IC COMB FILTER/DEFECT CORRECTOR	35	157583	2861095-001	ACTUATOR, RECEIVER
U3401	149018	1421754-001	IC ARM STRETCHER DRIVE/ ERROR AMP	36	157946	2873027-002	CAM
U3402	149034	1421761-001	IC VIDEO CONVERTER	37	157945	2873043-002	ROD
U3501	149037	1421758-001	IC RF MODULATOR	38	157543	2873024-001	COUPLING, TRANSFER ROD
U4101	149035	1421760-002	IC AUDIO DEMODULATOR L+R	39	157563	2816453-504	GEAR, FUNCTION ASSEMBLY
U4102	149035	1421760-002	IC AUDIO DEMODULATOR L-R	40	157577	2861029-002	GEAR, PAWL DRIVE
U4200	154027	1421710-002	IC TRACK/HOLD MUTE	41	157568	2844015-001	NUT, PUSH
U4300	149018	1421754-001	IC AUDIO MATRIX & BUFFER	42	157588	2873026-001	ACTUATOR, ARM REAR REC
U4400	153405	1421754-002	IC DECODER RECTIFIER	43	157836	2816453-507	RAIL
U4500	149018	1421754-001	IC DECODER CONTROL	44	157571	2844055-001	SHIELD, SWITCH
U4600	153406	1421769-001	IC DECODER AMPLIFIER	45	157599	2861400-001	SCREW
U5101	155883	1421786-001	IC PLAYER CONTROL MICROCOMPUTER	46	157574	2861013-001	ARM, LOCKOUT CADDY RIGHT
U5102	149016	1421751-001	IC DAXI BUFFER	47	157538	2861085-002	ACTUATOR, MECHANISM OFF
U5901	155886	1421787-001	IC MECHANISM MICROCOMPUTER	48	157548	2873324-001	SPRING, OFF ACTUATOR
U5902	149018	1421754-001	IC TURNTABLE DRIVE	49	157572	2844057-001	INSERT, FRONT REC PAD
U6101	157633	1421805-001	IC FEATURES	50	157587	2873021-003	CRANK, DOOR STOP
U6102	157634	1421802-001	IC RKM	51	157562	2831466-002	PAD, REC FRONT
U6103	157635	1421783-001	IC OSD	52	157569	2844031-001	SPACER, SPINE HOLDDOWN
U6104	149017	1421753-003	IC 5V REGULATOR	53	157582	2861057-001	ROD, HOLD DOWN SPINE
U6105	157636	1421734-002	IC D FLIP-FLOP	54	158000	2843632-001	SPRING
VR2001	156030	1471898-015	DIODE ZENER 5.8V	55	157871	2873392-001	STOP, CADDY MISALIGNMENT
VR3301	149042	99202-315	DIODE ZENER 9.1V	56	157591	2873348-001	BLOCK, LIFTER LOCK
VR5101	141829	1471898-006	DIODE ZENER 2.85V	57	157529	2843660-001	SPRING, TORSION READ PAD
VR6101	141829	1471898-006	DIODE	58	157542	2873016-001	SPRING, SPINE LATCH
VR6102	157630	1497049-004	DIODE	59	157610	2873016-002	SPRING, SPINE LATCH
W6101	159636	2873391-002	CABLE 10 CONDUCTOR	60	157537	2861005-139	LATCH, ASSEMBLY
W6102	159637	2873391-001	CABLE 5 CONDUCTOR	61	157531	2843697-003	CLIP, SPACER
Y3401	157186	2872120-005	CRYSTAL 5.11MHZ	62	157523	2831467-001	PAD, REAR RECEIVER
Y5901	157185	2872120-006	CRYSTAL 3.58MHZ	63	157541	2873013-001	GEAR, LOWER POWER ASSIST
153933	1466338-528	* CORD, POWER	64	157528	2843656-002	SPRING, SPINE PUSHBACK	
157992	2861060-002	COVER, BOTTOM RF MOD	65	157604	2816456-503	ROD, TRANSFER ASSEMBLY	
157990	2872684-001	COVER, BOTTOM COMB FILTER	66	157549	2873334-001	SHIELD, AC BOARD	
157991	2861416-001	COVER, TOP RF MOD	67	157854	2831487-002	PLATE, SWITCH MTG	
157534	2844019-001	GROMMET, STRAIN RELIEF	68	153026	93605-106	RETAINER	
143813	1442970-007	POWER CORD	69	157602	2861068-002	SPINDLE, TURNTABLE	
149231	2840997-001	INSULATOR, FOR Q2005	70	157999	2873092-002	SPRING	
158001	2861422-001	KEY, POLARIZING	71	157603	2873091-002	SPRING, DISC GROUND	
158003	2816401-505	SHIELD, MICROPROCESSOR	72	155880	2816455-501	TURNTABLE	
154403	1447129-002	SHIELD, COMB FILTER	73	157864	2861400-013	SCREW	
139506	1449797-001	SPACER, TRANSISTOR MTG	74	157556	2873369-002	SPACER	
158022	2873023-101	TERMINAL, FOR P7,P8,P12,P6102, P6104, P6106,P6107	75	158670	2840736-004	GROMMET	
		TERMINAL, SOLDERLESS	76	157853	2873042-002	BRACKET, SWITCH	
			77	157605	2816456-502	ARM, SWEEPER ASSEMBLY	
			78	157606	2816456-506	ARM, LOCK 1 PAIR	
			79	157544	2873047-002	SHAFT, ARM CARRIAGE	
			80	157927	2861434-002	SHIELD, ESD	
			81	157551	2873347-001	SUPPORT, CENTER MASTER BOARD	
			82	157527	2843655-001	SPRING, TRANSFER ROD	
			83	149084	990303-086	NUT	
			84	157532	2844001-002	PLATE, FILLER	
			85	157550	2873335-003	BRACKET, DISPLAY HOLDDOWN	
			86	157996	2861400-012	SCREW	
			87	157554	2873356-001	COVER, SWITCH	
			88	157547	2873323-001	SPACER, SWITCH	
			89	157539	2861408-001	SHIELD, POWER SWITCH	
			90	157540	2861424-002	CAP, POWER SWITCH	
			91	157997	2843605-001	SCREW	
			92	157533	2844007-001	SPRING, SWEEPER EXTENSION	
			93	157870	2844022-002	CLIP, GROUNDING	
			94	157526	2831703-001	COVER, BOTTOM	
			95	157558	2873377-001	BUSHING, BASE PAN	
			96	157552	2873349-002	FOOT, PAD	
			97	157536	2844048-001	PLATE, REINFORCING	
			98	157546	2873302-002	NUT, ADJUSTING	
			99	157530	2843689-002	SCREW, HEIGHT ADJUSTMENT	
			100	157559	2873389-001	WASHER, GUARD ADJ NUT	
			101	159571	2861433-001	PANEL	
			102	157849	2843683-001	PLATE, THRUST	
			103	157598	2873065-003	GEAR, 3RD REDUCTION	
			104	157597	2873011-001	GEAR, 2ND REDUCTION	
			105	157601	2843624-001	GEAR	
			106	157596	2873064-001	GEAR, 1ST REDUCTION	
			107	157600	2861047-001	LEVER	
			108	157609	2861050-002	BRACKET	
			109	157937	2812595-507	PLUNGER	
			110	157998	93600-115	SCREW	
			111	157648	2812593-502	ARM, PICKUP LESS CARTRIDGE	
			112	157876	2873068-001	LATCH	
			113	157883	2873337-002	SPRING, LIFTER LOCK	
			114	157875	2812595-505	COVER, CARTRIDGE	
			115	157877	2873083-001	CLIP	
			116	157886	2812595-504	LIFTER, ACTUATOR ASSEMBLY	
			117	157882	2873072-001	SHAFT, LIFTER	
			118	157888	2844023-002	PLUNGER, LOCK	
			119	157874	2873374-001	BEARING	
			120	157881	2861049-002	RACK, STEPPER DRIVER	
			121	157890	2843659-004	SPRING, LOCK	
			122	157889	93605-402	RETAINER, E-RING	

MECHANICAL ASSEMBLIES

NOTE: SOME PARTS WITH ITEM NUMBERS ON EXPLODED VIEWS MAY NOT BE AVAILABLE SEPERATELY, OR MAY BE AVAILABLE ONLY AS PART OF AN ASSEMBLY.

1	159573	2831493-004	* CABINET, TOP
2	158241	2816230-119	SCREW
3	157868	2873332-003	ROD, DOOR PUSH
4	157862	2861423-002	COVER, CABLE
5	157566	2873364-001	SPRING, POWER BUTTON
6	157863	2873405-001	NUT, PUSH
7	159645	2861019-003	BUTTON, POWER SWITCH
8	159572	2831482-003	* CABINET, FRONT
9	157580	2861032-002	PIVOT, DISC (LEFT)
10	157858	2861456-508	DOOR, CADDY
11	159646	2831471-003	BUTTONS, 7 FUNCTION
12	159580	2816419-504	PANEL, FRONT ASSEMBLY
13	157579	2861032-001	PIVOT, DISC (RIGHT)
14	157578	2844064-001	CLIP, GROUND
15	157522	2831443-001	SPINDLE, RECEIVER
16	157565	2843699-001	WIRE, CAMSIDE REC
17	157590	2873329-002	COVER, GEAR
18	157592	2873380-002	BELT
19	157584	2861432-001	PULLEY, & GEAR 1ST REDUCTION
20	157560	480366-005	RETAINER, RING
21	157576	2861026-002	GEAR, & PINION
22	157585	2873003-001	GEAR, POWER ASSIST
23	157573	2844062-001	WASHER, SHIM
24	157608	2831483-003	RAIL
25	155094	93610-105	WASHER
28	157564	2843631-001	SPRING, CADDY LOCKOUT
29	157575	2861014-001	ARM, LOCKOUT CADDY LEFT
30	155099	2841782-001	SCREW
31	157545	2873055-004	HUB, ASSEMBLY POWER ASSIST
32	157586	2873004-001	SHAFT, HUB POWER ASSIST

MECHANICAL ASSEMBLIES

NOTE: SOME PARTS WITH ITEM NUMBERS ON EXPLODED VIEWS MAY NOT BE AVAILABLE SEPERATELY. OR MAY BE AVAILABLE ONLY AS PART OF AN ASSEMBLY.

1	159573	2831493-004	* CABINET, TOP
2	158241	2816230-119	SCREW
3	157868	2873332-003	ROD, DOOR PUSH
4	157862	2861423-002	COVER, CABLE
5	157566	2873364-001	SPRING, POWER BUTTON
6	157863	2873405-001	NUT, PUSH
7	159645	2861019-003	BUTTON, POWER SWITCH
8	159572	2831482-003	* CABINET, FRONT
9	157580	2861032-002	PIVOT, DISC (LEFT)
10	157858	2816456-508	DOOR, CADDY
11	159646	2831471-003	BUTTONS, 7 FUNCTION
12	159580	2816419-504	PANEL, FRONT ASSEMBLY
13	157579	2861032-001	PIVOT, DISC (RIGHT)
14	157578	2844064-001	CLIP, GROUND
15	157522	2831443-001	SPINDLE, RECEIVER
16	157565	2843699-001	WIRE, CAMSIDE REC
17	157590	2873329-002	COVER, GEAR
18	157592	2873380-002	BELT
19	157584	2861432-001	PULLEY, & GEAR 1ST REDUCTION
20	157560	480366-005	RETAINER, RING
21	157576	2861026-002	GEAR, & PINION
22	157585	2873003-001	GEAR, POWER ASSIST
23	157573	2844062-001	WASHER, SHIM
24	157608	2831483-003	RAIL
25	155094	93610-105	WASHER
28	157564	2843631-001	SPRING, CADDY LOCKOUT
29	157575	2861014-001	ARM, LOCKOUT CADDY LEFT
30	155099	2841782-001	SCREW
31	157545	2873055-004	HUB, ASSEMBLY POWER ASSIST
32	157586	2873004-001	SHAFT, HUB POWER ASSIST

Continued on next page

Replacement Parts Continued (See Product Safety Note on first page of this parts list)

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
123	157936	2831713-001	COIL, KICKER/SKIPPER	CR1002	148056	2811593-001	DIODE LED
124	157938	2812595-506	COIL, ARM STRETCHER ASSEMBLY	PW1000	159568	2844126-502	CIRCUIT COMPLETE
125	157878	2873088-001	GASKET, GROUNDING	Q1001	148996	1417318-003	TRANSISTOR
126	157879	2844073-001	RETAINER, PUSH-ON	Q1002	146847	1417306-013	TRANSISTOR
127	157887	2861088-001	ACTUATOR, SWEEPER	Q1003	157808	1417347-005	TRANSISTOR
128	157891	2843659-003	SPRING, SWEEPER PLUNGER	Q1004	142190	1417330-001	TRANSISTOR
129	157884	2873312-001	ROLLER	Q1005	146847	1417306-013	TRANSISTOR
130	157885	2812595-503	ARM, SWEEPER	R1014	159569	2861600-001	NETWORK
	157521	1490104-004	RETAINER, WIRE TOP LOCKING	U1001	157806	1421774-001	IC
	157555	2873363-001	RETAINER, WIRE SIDE LOCKING	Y1001	157804	1422271-004	CRYSTAL
REMOTE PREAMP					159566	2831396-001	BUTTONS
MCY005C					159563	2831336-002	CASE, BOTTOM
MCY 005C	158664	2844138-503	‡ MODULE COMPLETE		159564	2831397-002	CASE, TOP
C901	146365	2840361-551	CAP LYTC 4.7UF R 35V		157801	2870620-002	CONNECTOR, EDGE BOARD
C902	141868	2840361-161	CAP LYTC 1UF R 50V		157803	2872801-001	CONTACT, BATTERY
C903	146439	2841288-363	CAP LYTC .47UF M 85C 50V		157791	2860777-001	DOOR, BATTERY
C904	143879	1491407-91M	CAPCD 1000PF M Z5P 50V		157793	2841285-002	FOOT
C905	143879	1491407-91M	CAPCD 1000PF M Z5P 50V		157799	2831334-002	HOLDER, L BATTERY
C906	147971	2843235-31M	CAPCD .01UF M Z5P 50V		157800	2831334-001	HOLDER, R BATTERY
C907	141868	2840361-161	CAP LYTC 1UF R 50V		159567	2831507-001	SWITCH, KIT CONTACT AND SPACER
C908	145315	1491408-52M	CAPCD 2700PF K Z5P 50V		157789	2860775-001	LENS, IR
C909	146211	2840362-141	CAP LYTC 10UF R 25V		159565	2831398-001	OVERLAY
C910	141868	2840361-161	CAP LYTC 1UF R 50V		129796	1444961-001	SPRING, BATTERY CONTACT
C911	147971	2843235-31M	CAPCD .01UF M Z5P 50V		157797	2844414-001	SPRING, GROUND
CR901	119597	1471872-010	DIODE	STYLUS CARTRIDGE			
CR903	119597	1471872-010	DIODE	154216	2816412-501		CARTRIDGE, VIDEO PICKUP
CR904	119597	1471872-010	DIODE	TOOLS & LUBES			
CR902A/B	150711	2815416-001	DIODE PHOTO	149073	2812522-503	• CADDY, LESS DISC	
L901	157642	1445867-008	COIL	153394		DISC, STEREO ALIGNMENT	
Q901	148070	1417411-001	TRANSISTOR	156529		• GAUGE, TURNTABLE HEIGHT	
Q902	145410	1417330-011	TRANSISTOR	149053	2811825-002	LUBRICANT, OIL	
Q903	148061	1417333-002	TRANSISTOR	149247	2811870-001	LUBRICANT, RYKON	
Q904	148061	1417333-002	TRANSISTOR	151303		• TOOL, HEX 2.5MM	
R903	157643	2861160-001	NETWORK	159251		• TOOL, LIFTER ALIGNMENT	
	157640	2840591-002	COVER, REAR	INCLUDED ACCESSORIES			
	133319	938316-013	GROMMET	AH011	2871056-001	ADAPTER, 75 OHM COAX TO 300 OHM TWIN LEAD OUTPUT	
REMOTE TRANSMITTER ASSEMBLY				AH018	2871464-001	ADAPTER, 75 TO 300 OHM W/90 DEGREE PUSH-ON COAX CONNECTOR	
CRK36A					2816991-001	BATTERIES, 1.5V AA	
	156533	1457638-501	‡ TRANSMITTER, REMOTE		2817354-001	BOOK, INSTRUCTION	
C1001	157810	2841205-009	CAP LYTC 3.3UF 50V	AH010	2871472-001	CABLE, 300 OHM EXTENSION 5 FEET	
C1002	157811	2841245-301	CAPCD .1UF M Z5U 50V		153938	2872677-001	CABLE, STEREO
C1003	148060	2840392-82M	CAPCT 150PF K Z5P 0050V	AH004	2873052-001	CABLE, RF	
C1004	148060	2840392-82M	CAPCT 150PF K Z5P 0050V		2817358-001	CARD, SIMPLIFIED INSTRUCTIONS	
C1005	157809	1490300-371	CAP LYTC 2.2UF 63V	156533	1457638-501	‡ TRANSMITTER, REMOTE CRK36A	
C1006	145396	2840392-92M	CAPCD 180PF M Z5P 50V				
CR1001	148056	2811593-001	DIODE LED				



FILE
1983
SJT 400
Addendum—1

SelectaVision® VideoDisc System Addendum Service Data

Model SJT 400

RCA Corporation Consumer Electronics

Technical Publications

P.O. Box 1376 Indianapolis, Indiana 46206

RCA Inc.

Technical Publications

5515 Royalmount Avenue, Town of Mount Royal, Quebec, Canada H4P 1J8

Canada Stock Numbers:

Add prefix 62 to all stock numbers

Purpose of This Addendum: To Update Replacement Parts List.

Filing Instructions: File immediately in front of Basic Service Data.

SUMMARY OF ADDITIONS/CHANGES COVERED BY THIS ADDENDUM

Original Service Data Contents	Page(s)	Additions/Changes In This Addendum	Page(s)
Replacement Parts List	70 thru 76	Replacement Parts List Revisions	2
Voltage Chart	27	Add Note 4 to page 27	1

Note 4: Digital Pulse See Schematic Waveform

1983 SJT 400 Addendum—1

This is an **Addendum Service Data**. It covers model-related information and any exceptions to the Basic and/or Supplement Service Data 1983 SJT 400

First Edition — First Printing

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SJT 400

BEFORE REPLACING PARTS, READ THE FOLLOWING:

RCA-Approved Substitute Stock Numbers—Before ordering stock numbers in this parts list, look for an RCA-approved substitute stock number in the current *RCA Distributor & Special Products Price Schedule*. This will minimize your service time and avoid ordering parts you already have in stock.

See your RCA Distributor for Replacement Parts and Accessories.

Warranty Status of Assemblies and Parts—The warranty status of some assemblies and parts are indicated by one of the following Warranty Status Codes:

- Complete assembly not eligible for warranty exchange or replacement. Eligible for warranty exchange for new or rebuilt unit.
- Complete assembly eligible for warranty replacement with new or rebuilt unit.

All parts listed without a Warranty Status Code symbol are eligible for warranty replacement as discrete components.

Warranty replacement of cabinet parts requires prior approval of RCA.

Warranty Status and Specifications of assemblies and parts are subject to change without notice.

PRODUCT SAFETY NOTE—Components marked with a (★) have special characteristics important to safety. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** in the Basic Service Data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a (★), replacement of RCA assemblies with other assemblies not RCA approved may result in a safety hazard.

Canada Stock Numbers:
Add prefix **62** to all stock numbers.

.....AVOID REPLACEMENT PART ERRORS.....

File supplements and addendums immediately upon receipt, and consult the parts lists in them before ordering parts.

NOTE: For complete coverage of all parts and assemblies used in instruments equipped with the chassis series to which this service data relates, consult the following publications:

● **Basic Service Data**—Chassis and tuning systems and most related parts and assemblies that do not differ from one model or model group to another.

● **Service Data Supplements**—Cabinet, auxiliary, and other parts and assemblies that differ from one model group to another.

● **Service Data Addendum**—Any parts additions, deletions, or other changes made after initial production.

Do not replace or order parts without first consulting any Addendum(s) that may have been issued since publication of this service data.

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
UNDER:			
ELECTRICAL COMPONENTS			
ADD:			
FL4101	160168	2861062-001	FILTER
FL4102	160169	2861062-002	FILTER
FL4103	160170	2861062-003	FILTER
FL4104	160171	2861062-004	FILTER
FL4105	160172	2861062-005	FILTER
FL4106	160173	2861062-006	FILTER
CHANGE TO READ:			
J4602	157181	2816401-503	JACK AUDIO W/BRACKET
Q6101	146847	1417306-013	TRANSISTOR ANTENNA BUFFER SWITCH

SYMBOL NO.	STOCK NO.	DRAWING NO.	DESCRIPTION
R5308	160542	2815583-747	RES CF 1/8W 2% 120K
R5917	161710	2818520-48	RES FUSE 1/2W 5% 22R
U5101	155885	1421786-003	IC PLAYER CONTROL
UNDER:			
MECHANICAL ASSEMBLY			
CHANGE TO READ:			
7	157845	2861019-002	BUTTON, POWER